OVERVIEW

For All Educational Executives

September 1960

THE CORPORATE CITIZEN

A BUTTENHEIM PUBLICATION

How Imaginative Engineering Provided Air Conditioning To Fit A School Budget

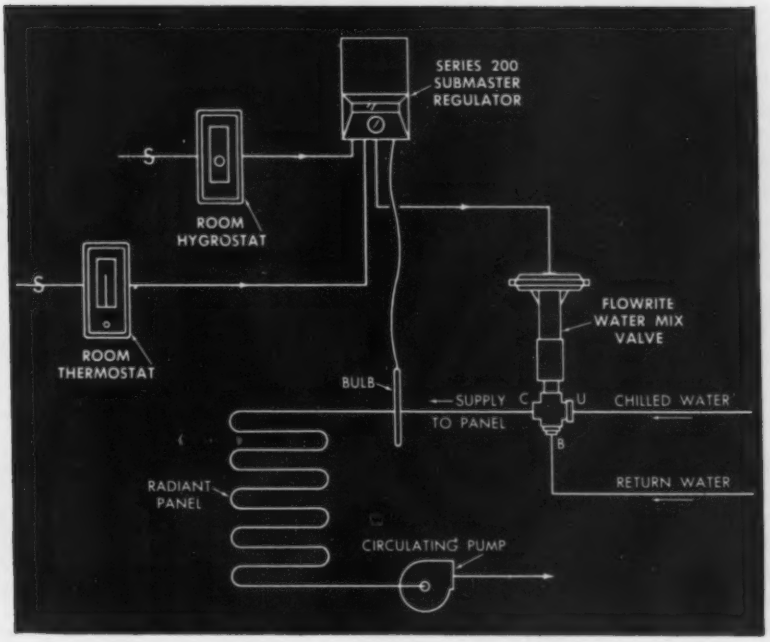
Must school air conditioning always be "too expensive"? Perkins & Will, Chicago architects and engineers, didn't think so last year when they designed suburban Homewood-Flossmoor High School. Without exceeding the school budget, they provided an air conditioned area large enough for complete summer sessions, including 15 classrooms, the library and all administrative offices. Actually, cooling for 25,000 square feet added less than 3½% to normal building cost — less than $4 per square foot of cooled area.

Homewood-Flossmoor High School, Flossmoor, Illinois. Air conditioned section (center) connects to other school facilities by glass-enclosed passageways.
Architects and Engineers: PERKINS & WILL, CHICAGO
Mechanical Contractor: THE ECONOMY PLUMBING AND HEATING CO. OF CHICAGO.

Perkins & Will team of architects and engineers works out details of the cooling system design features and controls for the Homewood-Flossmoor school. From left to right are F. Philip Brotherton, Designer and Project Architect; Rudolph J. Houkal, Chief Mechanical Engineer, and Edward C. Colin, Chief Structural Engineer.

How it was done

Perkins & Will grouped all rooms where both heating and cooling were desired into one section of the school. An interesting design feature is the core of 15 classrooms, surrounded on all sides by other rooms. The fuel savings realized from this "insulated" core help defray the added expense of cooling the entire summer school section. The engineers concentrated all mechanical service equipment beneath this section to eliminate long air conditioning channels. Double ducts and automatic controls were carefully designed for easy switchover to cooling and to take full advantage of tempered return air and outside air during spring and fall seasons.



Ceiling Panel Condensation Control

To back up the mechanical efficiency it so carefully designed into the heating, cooling and ventilating system, the Perkins & Will firm specified a Powers system of pneumatic temperature control, including the important dew point control which acts on the chilled water auxiliary cooling used in rooms exposed to the outside. This control (see diagram) utilizes a Powers Water Mix Valve on the ceiling panel chilled water supply and a low limit Submaster Regulator. The Powers Hygrostat measures room humidity conditions and resets the low limit temperature to prevent condensation on panel surfaces, yet allows supply water temperature to be as low as possible for maximum cooling.

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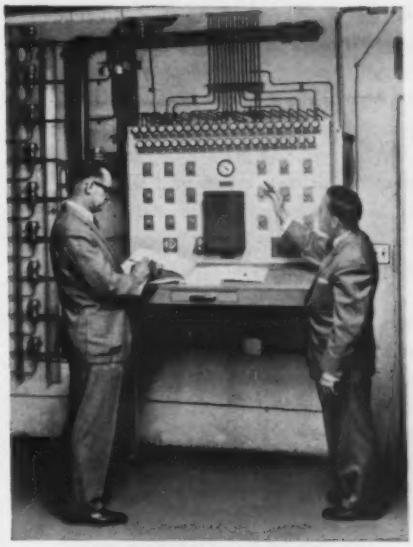

Homewood-Flossmoor Maintenance Superintendent William C. Drews (left), takes readings from the automatic Powers pneumatic control panel.

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OVERVIEW

For All Educational Executives

A Buttenheim Publication

As the Doors Open . . .

. . . for the new academic year 1960-61, our staff is proud to be putting in the hands of readers what we consider to be the outstanding issue of OVERVIEW to date—an issue that clearly illustrates our original concept and continuing goal for a magazine serving *all* educational administrators.

The Table of Contents is only one turn of the page away to be sure, but let me jump the gun enough to spotlight three articles:

The Corporate Citizen
Bridal Suites in the Ivory Tower
The Subverted Classroom

These are articles not to be found often, if at all, in other educational magazines. The information each contains may not seem directly related to the day-to-day concerns of many readers. But I am sure the readership rating of all three will be near the top of the scale. OVERVIEW will treat more and more of the broad-scale problems of today which keep impinging on education—an awareness of which the administrator must have to make correct decisions on what appear to be routine questions.

What we shall keep trying to foster, despite our own errors and shortcomings, is the broad outlook referred to by Ralph Waldo Emerson in this passage from "Representative Men":

"I count him a great man who inhabits a higher sphere of thought into which other men rise with labor and difficulty; he has but to open his eyes to see things in a true light and in large relations, while they must make painful corrections and keep a vigilant eye on many sources of error."

Donald V. Buttenheim

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OVERVIEW is published monthly by the Buttenheim Publishing Corporation, 470 Park Avenue South, New York 16, New York. Edgar J. Buttenheim, Chairman of the Board; Donald V. Buttenheim, President; G. E. Carney, Treasurer. Publication office, 10 McGovern Ave., Lancaster, Pa. Second-class postage paid at Lancaster, Pa. Subscription rates: United States and Canada—1 year, $5.00; $1.00 per copy; back or reference issues $1.00 per copy. Other Foreign Countries—$8.00 a year. Member of Educational Press Association. Microfilms, University of Michigan, 313 N. First Street, Ann Arbor, Michigan.

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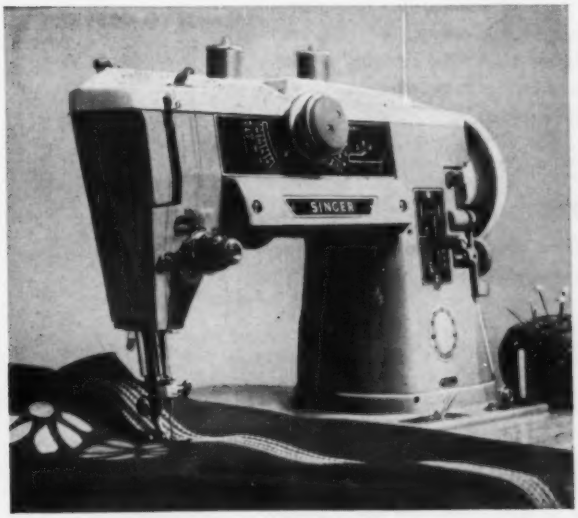

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OVERVIEW

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September 1960

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LETTERS

Windowless Classrooms?

● *Ed.: In last month's* "Forum" *we reported Syracuse Superintendent Paul Miller's challenging question: Are windows, no longer used for light or ventilating, and often affording more glare than view, becoming obsolete in schools? Response was quick and vehement:*

Whether the school is to have windows or not depends on the outside environment. No one would recommend the removal of beautiful paintings from the interior of the school. Why remove the beautiful changing pictures of our great outdoors? Talk of windowless schools is nonsense, if schools are located in attractive settings.

KENNETH A. WOOLF, (Hunterdon) County Superintendent, Flemington, N. J.

. . . I think we could simplify the problems of lighting and heat control in a windowless installation. I am sure that from a purely engineering point of view we may be able to do a better job of controlling heat and light environment in a windowless pillbox structure. . . .

It seems to me that the kind of thing that takes place in a school is more closely parallel to household activities than it is to activities taking place in any other type of building. So, when and if we are ready to accept an underground environment for homes for raising our children, then I think we are ready to accept them for school purposes.

Certainly there is something more to life than just existing in a cave, however well it is air conditioned and lighted. Shutting one's self up in an artificial thermal and visual environment may be the penalty which we have to pay for progress. But I am not quite ready to accept this type of environment. It would mean, as far as schools are concerned, an

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Letters (continued)

entirely vicarious method of learning; that is, through the medium of books, machines, tapes, recording, television, etc. With no actual direct contact with the outside world, all learning would come through other than direct means. I think that we must have a direct close feeling—a sense of belonging to the rest of the world. The world suffers enough now from lack of communication. To isolate it further is wrong.

EBERLE M. SMITH, Eberle M. Smith Associates, Inc., Detroit, Mich.

What are windows used for now? You don't answer this question in the conventional terms of light and ventilation. If these were the only purposes windows served I would think an underground school would serve us well. In fact, I've seen some programs that ought to be buried deep where no one could see them.

Windows do serve to protect the children from the elements. But isn't there some real value in watching the birds in the feeding stations which the children built outside the window? I think of how exciting it was to see a class group prepare a bed of flowers and watch them grow as the seasons passed. And what a pleasure it was to watch the beauty of the falling snow and discuss the wonders of nature as we see them in snow crystals. And today would be a beautiful day to study the different cloud formations. I have also been in classrooms where the teaching was so boring I was glad the children had a chance to get some relief by looking out at the passing scene—even though it be a street scene in a large city. I'm not yet ready to go underground.

W. PAUL ALLEN, Acting Superintendent, Scarsdale (N. Y.) Public Schools

I would think it was hardly a question whether or not windows were obsolete; what your question should be is: Are people obsolete?

If the various gentlemen who run the large companies and depend on Madison Avenue to make a market for their products have their way, people will be clothed, sheltered, fed, and stimulated, but only in ways to suit the market. Long production runs require that the statistical average be real; people as people are thus only a nuisance. I feel sure that too soon for all of us the manufacturers will be successful—there will be no more people—only mummies.

DONALD BARTHELME, FAIA, Houston, Tex.

Are windows obsolete? The enclosed photograph [P. & W.'s woodsy-

Hedrich-Blessing

sited Heathcote School, Scarsdale, N. Y.] serves as my answer.

CHARLES WILLIAM BRUBAKER, Perkins & Will, Chicago

. . . I heartily second Paul Miller's motion about the uselessness of windows. Glass in schoolhouses has for some time been a fad, an expensive, troublesome, maintenance-compounding, education-hindering fad. May we soon build our school buildings so that they bear some reasonable resemblance to the level of our scientific and technological development!

AUGUST W. EBERLE, Provost, University of Chattanooga, Tennessee

The following comments come from members of the architectural firm Caudill, Rowlett and Scott, Houston, Tex.:

The windowless school concept in the hands of inexperienced school planners can be the worst crime against children since Child Labor,

and it seems to be gaining momentum.

If these designers are improving physical comfort at the expense of emotional comfort (and how can you separate the two?), it is wrong.

I think educators and architects alike should be vocal in trying to head off this trend. — HERBERT PASEUR

Schools without windows, how clever t'would be,/No heat loss nor glare, and controlled quality./"But what of the children," you're sure to plea,/"Aren't viewless walls bad psychologically?"/

We solved this too, I think you'll agree,/By eliminating what there was to see./Outside, our scheme is still maintenance-free, / With concrete lawns and a plastic tree.—BILL LACY

. . . We know that with assistance from modern technology we can create a perfectly controlled box environment. But is it perfect? Don't let us think for a minute that our children will necessarily produce in this perfect environment as hens in a continually lighted henhouse produce eggs. . . . Are we not, indeed, interfering with the learning process itself, when we separate the children from the world about them by inserting them into a hermetically-sealed envelope.

Herein lies our greatest challenge —that of determining the proper course—in this "yes-we-can-do-anything-world."—DON WINES

As a matter of record, our firm built windowless classrooms years ago. The Guymon school and Norman High School have classrooms without exterior windows. The same is true of schools we have built in Stillwater, Oklahoma; Kearney, Nebraska, etc., but in every case, these inside spaces have inside windows. And in every case, we have used considerable glass to keep the children from feeling they're in a sealed box. We think the feeling of fluid space is necessary.

In short, we have absolutely no objection to deep classroom spaces without outside windows, but we do have qualms about windowless school buildings.—WILLIAM W. CAUDILL

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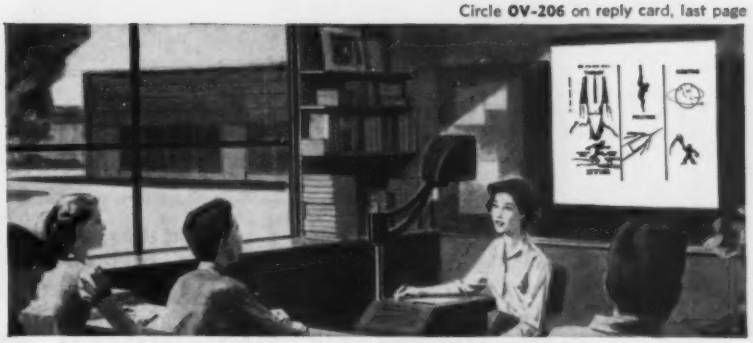

How VU-GRAPH "TEACHING ASSISTANTS" Extend The Capacity Of Your Present Faculty

By Stephen D. James, M.A. English, M.A. Ed.

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Michigan professor uses Argus TV camera to teach TV instruction

Edward Stasheff, Professor of Speech at the University of Michigan, explains:

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ONE VIEW

Archibald B. Shaw

Education's Double Duty

WE LOVE STRAW MEN. If we can somehow raise a flimsy phantom to fight over with our colleagues, we are able to ease our disturbing doubts as to whether we are really doing the job of education. Any real issues get beautifully buried in this kind of battle.

The liberal *vs.* vocational education furor, however important its implications for staff, budgets and buildings, for certification and licensing, and for status, seems to be just such a superficial sham. The most ardent proponents on each side agree that in the making of a teacher—or of a whole man—both ingredients are imperative. Their controversy seems to center on how and when they are added. The extremists of the *either* and the *or* both build unreal bogies. They all appear to proceed from an out-moded premise: that education is some sort of merchandise marketed in college and wrapped for delivery in a sheepskin at graduation.

It is claimed that one of the prime virtues of the liberal education is its ability to develop a self-educating man, and with some justification. But equally we don't have to go to India to find how futile the pursuit of knowledge can be to a man equipped neither by training nor inclination to live a useful and productive life.

It is just here that the greatest chasm grows between the expectations of parents on the one hand and the college's self-image on the other. The split is not new, but the tremendous growth in college enrollments has sharpened and deepened it. The fault for this failure of common understanding is in part in the colleges; in what their alumni, their public relations men, their presidents, and even their admissions officers have been telling us. For forty years or more the superior earning power of college graduates has been used as bait for students and for endownments. To at least one senior class at high school in the early 20's, the admissions officer of an old and respected college showed charts to prove that college graduation meant *x* dollars more per year by age thirty.

The American people have consistently made clear their expectation of education, particularly higher education, that it should be of immediate benefit to the individual and to the state and nation. Land-grant colleges, compulsory education laws, free high schools, vocational schools, junior and community colleges—yes, even the Civilian Conservation Corps—were founded on that concern fully as much as on the almost instinctive American effort to provide equal opportunity for all.

In one view, the issue should never be joined. Making a living and making a life are inseparable. Helping both is a double duty. In an era when wisdom is still fruitfully pursued the whole life through, education for work has become equally a never-ending constantly changing challenge. Neither is the job of the college; both are the obligation and opportunity of the individual. The job of the college is to help students get well started on their twin tasks. Its cherished ideal is to provide the inspiration and impetus that will keep them always learners, always doers, always seekers after truth and duty, and after the better life and better living for all their fellow-men.

The view of President Beatty of Wentworth Institute is that education is not like the vial of colored sands in which the layers lie one atop the other: first the fundamentals, then college preparation, then a liberal education, and finally the profession or vocation. Rather it is a stream in which vocational and liberal education flow together in ever-broadening, ever-deepening flood. In his commencement address he suggested that the full flavor of Plato or Kant, Shakespeare or Shaw might best be savored at forty, while the first flowering of skill in a vocation might come before twenty.

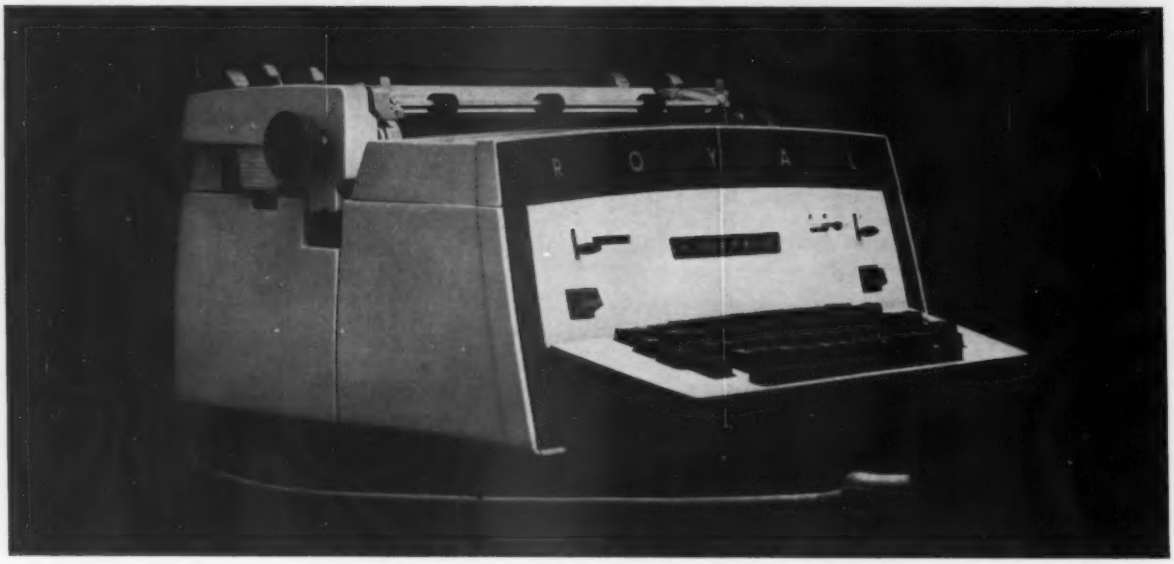
Is this a real issue? Is it truly the mark of an intelligent man to cling to one and forsake the other alternately? Do we want our liberating and humanizing education wrapped up in a sheepskin? Must higher education be purveyed in pure packages, or even be laid down in layers? Or can't we muster the wit and the wisdom not only to acknowledge cheerfully the twin tasks, but effectively to serve this double duty?

Conferences like the series of three ending with the San Diego TEPS meeting early this summer show that there is nothing of substance that separates us. To one view this ghost should be laid for all time and we should get on with ways of adapting our educational structure to this dual function. ●

Circle OV-208 on reply card, last page

SCHOOLS BUYING 45% MORE ROYAL ELECTRIC TYPEWRITERS IN 1960*

*May-June, 1960 compared to May-June, 1959 (the heavy school buying months.)



because schools as well as business firms can count on Royal's reputation for greater sturdiness, better service.

Schools all over the nation are opening in September with new Royal Electric Typewriters in business education classrooms. The reasons are simple:

1. Business firms are demanding more and more girls thoroughly trained on electric typewriters. (Business is buying more *Royal* Electrics than ever.)

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FORUM

Educational TV

Educational TV at its finest and most vivid came our way through the national conventions of the Democratic and Republican Parties. We (millions of us) not only got information of a factual sort—and by switching channels we could get different facts—but we felt the frustrations and triumphs, the helplessness and the forcefulness, the voluntary reconciliation and the involuntary submission which are an inextricable part of conventions.

To the immature who see things as black and white, their vicarious but real involvement in the process of platform- and candidate-making must have had a shock effect. But to all of us the anguish of the buried hopes and dreams, the thrill of courage, and maturity of acceptance of the majority view as a basis of action furnished an education in the democratic process and principles which is irreplaceable. Only through television was this available to so many.

On the whole we were well served by the networks. The efforts to make news, to over-dramatize, to slant, and to select that which would support personal convictions and prejudices were present, of course. So was the confusion which the mass of reporters, cameramen, and technicians so near-disastrously multiplied. But on the whole the awesome responsibility of playing journalist, artist, entertainer, and interpreter all at once while somehow in the mad confusion ensuring a balanced and whole story was responsibly and admirably fulfilled.

As the method so often affects the end, so does the educational aspect of convention-reporting influence not only the reporters but the activity reported. This is all to the good, since time has proven the fallacy in an earlier assumption that America's judgment is based on telegenic or showmanship attributes. Such changes in procedure as have taken place are for the good so far.

At any rate television did the best job yet, and here was commercial television at its educational best.

Still the Stepchild!

"Construction bids exceed estimates. Board will build within bond authorization by delaying equipment purchases and salvaging seating from storerooms." This is not a direct quote, but a paraphrase of a far-too-common "solution" to building and budget problems.

What's wrong with this? It directly denies the importance of good tools to the teaching-learning process. It makes equipment the stepchild.

A carefully planned equipment budget formed with a true understanding of the importance of all the aids so necessary to teaching, to learning, to comfort, and to efficiency, will not be abandoned so lightly. Nor will a budget which expresses the conviction of those who make the final decisions.

Of course, circumstances make compromise necessary between what is necessary and what is "possible." We have no easy answers, and we suspect those who do. We do plead for a much higher priority, a non-stepchild status, for the all-essential tools.

The Dynamics of Education

Education in the United States is the resultant of many forces in our history, economy, and attitudes. In a period of economic abundance, the school population has exploded along with the increase in family size and number. In the 1970's when the "post-war babies" start *their* families, school population will reach yet higher peaks.

Against this background W. W. Rostow's much-discussed new book, *Stages of Economic Growth* (Cambridge University Press), offers an interesting analogy. In a study of the stages of various countries' economic growth he points out that wealth must grow faster than population in order for an "economic take-off" or rapid transition from an agricultural to a technological economy which can lead, in turn, to the development of a "high mass standard of living."

In U. S. education, the technical know-how exists to make possible a take-off in educational quality. Except in the wealthy suburbs, however, our society has allowed the enrollment explosion to impoverish our schools, to drain their resources and energies, and to force the concentration of the profession upon community relations rather than improvement of teaching.

It is paranoia to increase the school population, to reduce the proportionate amount of the national pocketbook devoted to education, and simultaneously to scream about quality.

The pre-conditions for take-off exist. The harnessing of a great number of gadgets for educational use—TV, tape recorders in language learning, video tape recorders, teaching machines, automated record-keeping equipment—all offer ways to increase learning with less expenditure of teacher energy. Improvements in the organization of teacher and student time have been worked out at the various levels from elementary through college and, in some pilot situations, are presently in practice.

The public has not yet made the necessary choices in the expenditure of the national income which will not only meet the burden of enrollment increase but at the same time allow the progress that is technically possible. Only concerted action by leaders in the community will make possible the minor re-distribution of expenditures that will allow education to thrust ahead.—*From a speech to the Engineers Club in Trenton, N. J., by Stanton Leggett of Engelhardt, Engelhardt, Leggett and Cornell, New York.* ●

Circle OV-209 on reply card, last page

Rauland

SCHOOL SOUND SYSTEMS

RAULAND'S engineering experience provides in these systems absolute simplicity of operation, but with the complete flexibility demanded by present day school administration. Exclusive features and moderate cost have made RAULAND Sound the choice of thousands of educators. RAULAND systems are still giving reliable service after two decades of use.

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Three-Channel System; unusual program flexibility; capacity up to 221 rooms.

every desirable program facility and feature

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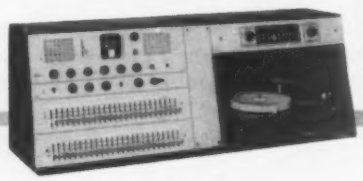
- ★ **Phonograph**—distributes phono program (transcription player or changer); also available for use with tape recorder
- ★ **FM-AM Radio**—selects any FM-AM radio program for distribution to any or all rooms
- ★ Optional Features—Disaster Emergency Switch; program clock signals; telephone intercom; light annunciation; remote controls, etc.

Model 5745
Two-Channel System; Desk mounting—compact and efficient



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ECONOMIC SCENE

Education and Business

AMERICAN BUSINESS and industry depend heavily upon education, training, and research for their progress. Simple agricultural societies can operate with simple educational system. Simple trading and commercial societies need a somewhat more sophisticated educational system. A technical, industrial society needs a highly advanced educational system.

Business prospers best today where the educational system is best. This is partly cause and partly result. A good educational system is necessary for the continued advance of business. The advance of business in turn makes it possible to support even better systems of education.

Business and industry need not only a good formal educational system in the community for its future workers but it needs to build an elaborate educational system of its own. This is what has happened in the United States. Business and industrial establishments in this country run an educational and training program that rivals in size and complexity that of the colleges and universities.

Business offers highly technical courses in physics, chemistry, and the other sciences. Industry's advanced training in atomic energy, drugs, transportation, and communication are probably ahead of the programs of any university. Industry's range of programs in management training are probably ahead of that offered by the universities. And as one would expect, in many applied fields the training programs offered by industry are far ahead of anything attempted by the formal educational system.

In the crucial fields of research and development, industry spends anywhere from ten to fifteen times as much as that spent by the colleges and universities. Two generations ago most of our research was done in the universities. Now, at least on a quantity basis, a major part of our new knowledge comes from research and development in industry.

Over 200,000 engineers and scientists are employed in research and development by business and industry. This is about the size of the total staff employed by all colleges and universities for instruction and research. This is probably somewhat more than ten times the size of the university staff devoted to research.

If industry is carrying on such a broad program in education and research, why does it need to be concerned about education in the elementary and high schools? The reason is very simple: The amount of education and training needed today is far greater than can

be provided by the best formal educational system and the best business educational system combined.

Because knowledge is expanding so fast, it is difficult to keep up with. In the field of medicine, for instance, doctors need to read dozens of technical reports every day to keep up-to-date. (Some doctors estimate if they spent all their time at it, they could not keep up with developments in drugs alone.) The job of keeping up with medical knowledge is so great that the medical profession must devise the best methods it can to keep up with the latest discoveries.

It makes no difference how good the background and general education is, or how good the specialized training in industry is, many professional and technical workers are still going to be unable to keep up with the rapidly increasing knowledge in their own fields.

Ten to fifteen times as much money is being spent on research as was spent twenty years ago. One would hesitate to say knowledge is expanding ten times as fast, but certainly it is expanding far more rapidly than are our arrangements for keeping up with it. Some authorities estimate that the field of chemistry is doubling the amount of knowledge every eight years; many other fields are doubling the amount of knowledge in ten or fifteen years.

Clearly in this kind of world it will be impossible for the regular system of education, dealing largely with young people, to keep the working population up-to-date in knowledge. It would be equally impossible for industry to do the entire job of education. In fact, it is becoming increasingly clear that business has a great stake in the development of a highly efficient formal educational system. By the same token, the regular educational system has much to gain by the development and expansion of a highly efficient system of education and training for people who are on the job. Clearly, unless business has a good general educational program to build on, the task would be almost hopeless.

It is for this reason that for many years leading businessmen have stressed the importance of education in the general economic development of the country. Now it is becoming increasingly clear that a strong general program of education is vital to business expansion and development. Net result is that many types of business have found it necessary to locate in communities that have a good school system.

The number of people seeking new knowledge and new information will largely determine the rate of development in any society. We are rapidly moving into a world where almost all people will be seeking new knowledge all their lives. The professions discovered this some time ago; now business, industry, agriculture, and most other occupations have made the same discovery. Success in all fields depends upon more and more knowledge. This is the reason our age will be known as the age of the knowledge-seekers. Business has found that those people who discover knowledge and those who pass it on are its most important asset.—HAROLD F. CLARK

Circle OV-210 on reply card, last page

YOU CAN OPERATE YOUR SCHOOL LUNCH PROGRAM WITH GREATER EASE, EFFICIENCY AND ECONOMY

...with the New ATLAS HCP Portable Electric Hot and Cold Food Cart!

The new ATLAS HCP Food Cart offers outstanding features and advantages for all types of centralized kitchen feeding operations. The ATLAS HCP Food Cart functions with maximum efficiency as a transporter of bulk hot and cold foods and as a serving top and reserve food supply in one unit when the cart has arrived in the serving area.

You can transport and serve bulk hot and cold foods which will retain their original appetizing qualities, appealing freshness and nourishment over extended periods of time.

ATLAS Model HCP-165 Portable Electric Hot and Cold Food Carts now in daily use are feeding up to 400 children, or 200 adults. ATLAS Model HCP-2000 is feeding up to 600 children, or 300 adults.

Both models available in gray baked hammertone enamel or stainless steel finish.

The ATLAS HCP Food Cart offers impressive savings, in food service costs in school lunch programs. It eliminates the additional expense of a new kitchen when it is necessary to expand existing operations.

Please write for brochure containing complete information.

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NATIONAL CORNICE WORKS
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BRIGHTER AO's New High-Speed Opaque Delineascope projects a brighter image than any other opaque projector you can buy...a full 145 lumen output. Screen illumination is uniform from edge to edge and definition is sharp from corner to corner.

Only American Optical uses all-glass reflecting surfaces to provide maximum illumination intensity. Glass reflectors will not tarnish or deteriorate...will not scratch with cleaning. Your AO Opaque will still produce the brightest screen image, even after years of service.

LIGHTER AO's New Opaque Delineascope is easily portable...weighs just 29 pounds. Copy platform is extra deep... plenty of room for material up to 2½ inches thick. Elevation locking device positions platform instantly at any desired level.

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☐ Please send full information on AO's New Opaque Delineascope.
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IN CANADA write—American Optical Company Canada Ltd., Box 40, Terminal A, Toronto, Ontario

CALENDAR

SEPTEMBER

1–7, American Psychological Assn. At Chicago, Ill. Exec. sec.: John G. Darley, 1383 16 St., NW, Washington 6, D. C.

3–17, 13th International Banking School. At Noordwijk, Holland. Sr. Deputy Mgr., American Bankers Assn.: William Powers, 12 E. 36 St., New York, N. Y.

26–30, National Recreation Assn. At Washington, D. C. Exec. dir.: Joseph Prendergast, 8 W. 8 St., New York 11, N. Y.

OCTOBER

2–6, American School Food Service Assn. At Washington, D. C. Ex. dir.: Dr. John Perryman, P. O. Box 8811, Denver, Colo.

4–8, National Council on Schoolhouse Construction. At Toronto, Ontario, Canada. Ex. sec.: W. D. McClurkin, Peabody College, Nashville 5, Tenn.

6–7, American Council on Education. At Chicago, Ill. President: Arthur S. Adams, 1785 Massachusetts Ave. NW, Washington 6, D. C.

7–12, Department of Rural Education. At Louisville, Ky. Ex. sec.: Howard A. Dawson, 1201 16 St. NW, Washington 6, D. C.

9–12, National Assn. of Physical Plant Administrators of Universities and Colleges. At Boston, Mass. Ex. sec.: John H. Sweitzer, Earlham College, Richmond, Ind.

9–13, Assn. of School Business Officials. At St. Louis, Mo. Ex. sec.: Dr. Charles W. Foster, 1010 Church St., Evanston, Ill.

14–16, National Assn. of Public School Adult Educators. At Denver, Colo. Ex. sec.: Robert A. Luke, 1201 16 St. NW, Washington 6, D. C.

17–19, Adult Education Assn. of the U.S.A. At Denver, Colo. Ex. sec.: Dr. Glenn Jensen, 743 N. Wabash Ave., Chicago 11, Ill.

17–21, National Safety Council. At Chicago, Ill. Secretary: R. L. Forney, 425 No. Michigan Ave., Chicago 11, Ill.

18–21, National Assn. of Educational Broadcasters. At San Francisco. Ex. dir.: Dr. Harry J. Skornia, NAEB, 14 Gregory Hall, Urbana, Ill.

18–21, American Dietetic Assn. At Cleveland, Ohio. Ex. sec.: Helen H. Anderson, 620 No. Michigan Ave., Chicago 11, Ill.

22–27, American School Health Assn. At San Francisco. Ex. sec.: Dr. A. O. DeWeese, 515 E. Main St., Kent, Ohio.

31–Nov. 4, American Public Health Assn. At San Francisco. Ex. dir.: Dr. Berwyn F. Mattison, 1790 Broadway, New York 19, N. Y.

NOVEMBER

6–7, Assn. of Urban Universities. At Cincinnati, Ohio. Asst. Sec.-Treas.: Mrs. W. O'Brien, 5972 Lannoo Ave., Detroit 36, Mich.

13–17, Assn. of University Evening Colleges. At San Francisco. Ex. sec.: Edwin H. Spengler, Director, School of General Studies, Brooklyn College, Brooklyn 10, N. Y.

14–16, American Assn. of Land-Grant Colleges and State Universities. At Washington, D. C. Ex. sec.: Russell I. Thackrey, 1785 Massachusetts Ave., NW, Washington 6, D. C.

15–19, Council of Chief State School Officers. At Santa Fe, N. Mex. Ex. sec.: Dr. Edgar Fuller, 1201 16th St., NW, Washington 6, D. C.

23–26, National Council for the Social Studies. At Boston, Mass. Ex. sec.: Merrill F. Hartshorn, 1201 16th St., NW, Washington 6, D. C.

Data for Delegates—Boston's Museum of Fine Arts has the world's finest collection of Oriental arts (even the Japanese borrow from it). The Gardner Museum, an "imported" Italian villa, has an eccentric art collection and breathtaking garden courtyard. You can step inside a relief globe in the map room at the Christian Science Monitor plant. Book fanciers can still find collectors' items in second-hand book stores in Scolley Square. Visitors will find it easier to see historic sites via Freedom Trail, a walking tour marked out along the streets in downtown Boston—bring comfortable walking shoes. November temperatures average 33°.

24–26, National Council of Teachers of English. At Chicago. Secretary: J. N. Hook, 704 S. Sixth St., Champaign, Ill.

27–30, National School Supply & Equipment Assn. At Chicago. Ex. Mgr.: Dave McCurrach, 27 E. Monroe St., Chicago 3, Ill.

30–Dec. 3, Institute of International Education. At San Francisco. Chief of Secretariat: Pearl G. Purcell, 1 East 67th St., New York, N. Y.

Circle OV-212 on reply card, last page

SCHOOL FLOOR MOPPING IS VERSATILE with new Dual-Duty "Convertible" by GEERPRES

Single Unit When You Want It!

Versatile, efficient, adapts to many mopping needs. One bucket for small-area jobs; two for larger areas. Two steel wire hooks couple 16-, 32-, 44-qt. sizes in any combination, slip into grommets located *behind* steel core in protective bumper, can't pull out. Hooks standard on all bumper equipped buckets. Buckets mounted on aluminum chassis with ball-bearing casters. Mop serves as handle. Buckets nest neatly for storage.

Double Unit When You Need It!

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WOULD YOU HAVE LIKED A 34″ x 46″ FULL COLOR WALL MAP OF AFRICA?

It was one of the many teaching aids sent to the more than 2200 teachers enrolled in the TIME Education Program. During the past school year, college and high school teachers also received periodic news quizzes, a reprint of TIME's Hawaii cover story, a large, authoritative map of the moon, a report on the American exhibition in Moscow by a US girl guide, and the 1960 TIME Cover Collection. Classes subscribing at the special student rates also participated for prizes in the Man of the Year Sweepstakes and the 24th Annual TIME Current Affairs Contest.

IF YOU WOULD LIKE to receive more information about the TIME Education Program, write to:

TIME

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College or School d

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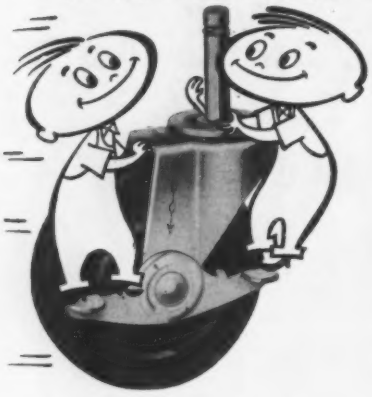

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HOLD IT!

It's easy to mobilize teaching aids with Bassick casters. Lab equipment, motion picture screens, partitions, furniture, exhibits, can easily be put on wheels for more effective teaching and easier learning. Built-in side brakes can lock equipment in position if need be. And marks are for students, not floors: non-marking Bassick wheels cut maintenance costs, protect every type of floor. Investigate Bassick casters for your school equipment. O.47

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Reader Aides for English Teachers

ENGLISH TEACHERS have reason to be grateful to officials at South Bay Union High School District (Redondo Beach, Calif.). The teachers have been given the services of teaching aides to help them with the chore of reading, correcting, and grading hundreds of student compositions each week. Unlike most aides, these work at home.

Each of the district's three high schools employs two readers whose job it is to check themes and other written work handed in to its English teachers. The readers are former teachers who are on leave or are currently on inactive status.

In a progress check made in June, officials found nearly universal approval of the plan from teachers, pupils, readers, and parents. "Experiments like this usually have rough spots the first year," said one, "but this is working out even better than we had hoped."

Principal H. C. Uhls of Aviation High School is probably most pleased with its success since he is credited with originating the plan at South Bay.

"Conant has emphasized what we've known for a long time," Uhls said, "that we need more effective instruction in English composition. But there is a ceiling on just how much one teacher can do in grading papers."

Aviation's Principal Uhls: "Our teachers had about hit the ceiling."

Under the reader plan, South Bay teachers assign students one theme a week and have the assurance that about forty percent of the work involved in grading the essays will be assumed by readers. They submit the papers of two of their five classes to the readers with a note explaining the purpose of the assignment. After the reader checks for errors and returns the papers, the teacher reads them quickly for content and style.

"Once the errors in spelling, punctuation, and grammar have been noted by the reader, the rest of the work and the grading goes quickly," one grateful teacher explained. "Of course there aren't enough readers to process all of our papers, but the help that two are able to give us has made a world of difference."

The papers eventually go back to the students, forming the basis of a follow-up lesson. One reader summarizes errors by type so that the teacher can quickly determine where emphasis should be in follow-up.

"Since I started reading their papers I have noted a great improvement," said one of the Mira Costa High School readers, a regular English teacher at the school currently on a maternity leave. "In fact, the improvement was evident within a week or so after we started the program last fall."

Mira Costa's other reader is also a regular member of the school's English department on maternity leave. Mira Costa's principal, Lloyd Waller, believes that a key factor in the plan's success is the high degree of understanding between reader and teacher.

The plan, officials say, is admittedly borrowed from the colleges and may be the first of many college methods to be adapted by secondary schools. ●

11:00 A. M.

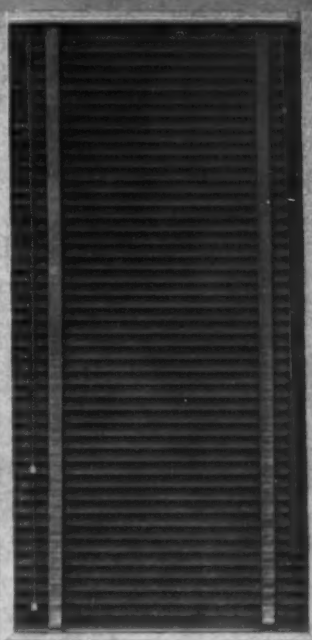
This movie is really sharp! Not a light leak anywhere.

REASON: The windows in this room are light-controlled with Flexalum Audio-Visual Blinds. These blinds make any room theatre-dark anytime. Here's why: (1) more slats per height plus (2) patented notch in each slat that permits adjacent slats to touch, equals (3) no between-slat light leaks. (4) Light-trap channels eliminate around-the-edge light leaks.

11:10 A. M.

The slides look great. Just enough light to take notes.

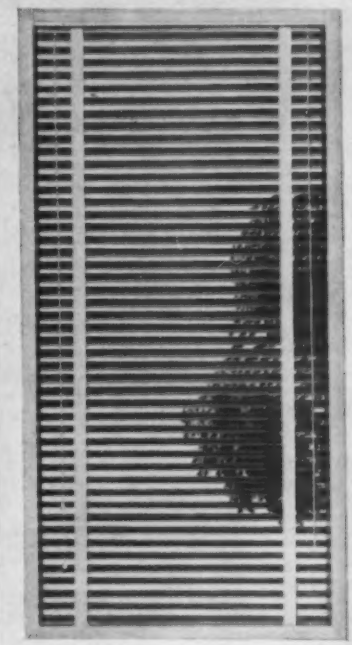
REASON: You get just the degree of light control you need with Flexalum Audio-Visual Blinds. No other form of blackout covering allows you this flexibility. And Flexalum Audio-Visual Blinds will always stop and stay just where you want them. They're precision engineered to operate so flawlessly, *they're guaranteed in writing for five full years.*



11:20 A. M.

Back to groupwork. Full daylight, instantly—no glare.

REASON: Nothing to take down, nothing to tug back. No wasted money for multiple coverings, no wasted classroom minutes. Flexalum Audio-Visual Blinds do the *whole* job — taking you from projection darkness to full light (or anything in between) with just a flick of a nylon cord. The plastic lined side channels eliminate all noisy flutter!



Get full-range light control—at low cost—with *Flexalum*® Audio-Visual Blinds!

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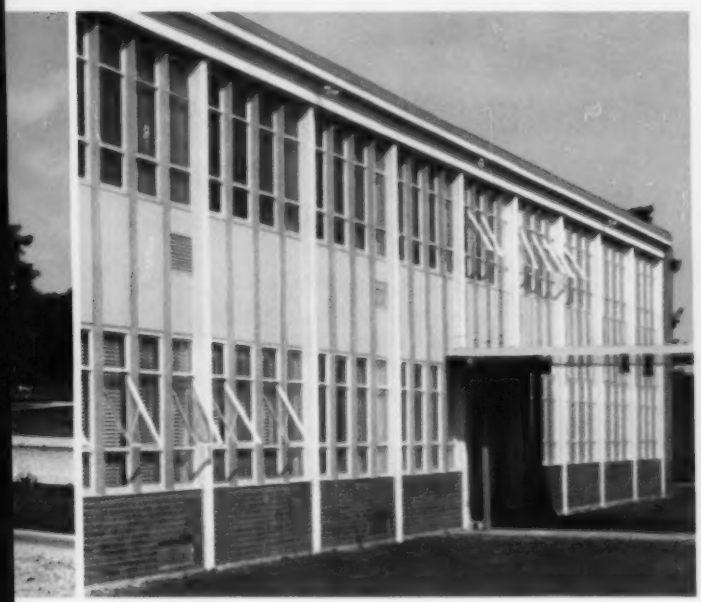
With construction costs showing no signs of leveling off, it's nice to know that there's still a way to build an attractive, functional school and yet save money. The answer: window walls of steel. Example: The Red Oak School in Highland Park, just outside of Chicago.

to build a school like this



The walls on this school are less than 1½ inches thick, including insulation, so there is more usable classroom space inside. They were factory-fabricated and bolted in place quickly by a small crew, so construction costs were cut. Window walls weigh less, making possible a lighter foundation. Savings will continue for many terms to come because porcelain enameled steel walls will never have to be painted, scraped, or resurfaced. Normal rainfall will keep them as clean as the day they went up.

With steel window walls, Highland Park received *more* school for its money. Your architect can show you how your community can do the same.

To learn how a typical community solved its school problem, send for U. S. Steel's free movie, "Plan for Learning." It's in sound and color and it's available from the U. S. Steel Film Distribution Center, 525 William Penn Place, Pittsburgh 30, Pa.

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3 BIG REASONS

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FILMSTRIP and SLIDE PROJECTORS

SCHOOL MASTER 750
shown with exclusive accessory rewind take-up and semi automatic slide changer.

1. *Your teaching efforts are more effective* when a School Master's brilliant projection is used. Pupils comprehend faster with the brighter, more detailed image . . . projection problems are minimized.

2. *You can use Filmstrips or 2 x 2 slides* with a School Master . . . a dual-purpose machine that utilizes the two most popular and effective visual materials. Conversion from one to the other is quick and easy . . . in seconds . . . without tools or removal of parts.

3. *You concentrate on teaching, not the projector.* So simple is its mechanism . . . so sure its operation, the School Master is easy for anyone to use.

School Masters, available in 500 and 750 watt manual or remote control models, are priced from $84.50. Exclusive accessory rewind take-up allows filmstrips to be rewound into storage container automatically.

GRAFLEX® AV RECORD PLAYERS

Light-weight, compact, dependable, Graflex AV Record Players were designed specifically for classroom use. Features: Astatic Power Point Ceramic Cartridge with two long-life sapphire needles; Micro-Balanced Tone Arm; High Fidelity Speaker; four speed floating turntable plays records up to 12" diameter; built-in jack for external speaker (AV-II only). Two models: AV-I (3 watts); AV-II (6 watts). Both models have sturdy, precision-built cases covered with attractive two-tone scuff-proof fabric.

For additional information on the equipment shown, see your Graflex A-V dealer. Or, write Dept. OV-90, Graflex, Inc., Rochester 3, N. Y. A subsidiary of General Precision Equipment Corporation.

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LATE NEWS

For further coverage, see pages 85–93.

BIG INVENTORY: A complete inventory of the world's languages is being undertaken by researchers at George Washington University. "No one has ever tried to compile a complete catalogue," said Kenneth W. Mildenberger, chief of the language development section of the U. S. Office of Education, which is sponsoring the work at the University under a one-year $47,700 contract. He estimated that there were about 5,000 languages spoken around the world.

Languages range from Abakan to Zyrien—both spoken in the Soviet Union—and from Ahlo, limited to fewer than 1,000 persons in Ghana, to English, spoken by more than 250 million people.

The inventory, explained Mildenberger, will be especially useful for government agencies with worldwide responsibilities.

* * *

SCHOOL BONDS SOAR: School bond issues are selling at a record high rate, according to latest figures released by Investment Bankers Association in Washington covering the first half of 1960.

Along with the sharp upswing in bond sales, voters in communities across the nation have been approving bond referendums at record levels.

School bond sales for the first half of 1960 total $1,173,101,000. This is $195 million more than for the first half of 1959; and if the pace continues throughout the remainder of the year, total sales will surpass the record high of $2.3 billion hit in 1958.

"We've just passed through a year or more when school bond sales have been on a downward trend," says IBA research director Frank E. Morris. However, he predicted another strong upward swing just beginning now.

As for new bond elections, voters approved 80.4 percent of the issues, by dollar value, submitted to them during the first six months of 1960. This is a substantial increase over the second half of last year (when 64.9 percent of the bond issues were approved) and over the first half of 1959 (when 76.7 percent were approved).

Dollar value of issues approved totals $870,522,000 for the first half of 1960 compared to $550,243,000 in a similar period of last year.

First-half figures were topped off by a remarkable record for June: $419,756,000 in school bonds approved by voters—the second highest month since IBA has been keeping records. Three hundred million of that sum was accounted for by a single statewide bond issue in California.

An interesting point is that while $320 million more has been approved by voters this year over last year, the feat has been accomplished in a smaller number of individual bond issues. Fewer issues are being presented and fewer are passing, but the issues themselves are growing in size and the voters are generally accepting them.

* * *

ALL-TIME HIGH: Increasing for the sixteenth consecutive year, enrollment in public and private schools from kindergarten through college will reach a new all-time high of 48,650,000 in the 50 states and the District of Columbia in the 1960–61 school year. Commissioner of Education Lawrence G. Derthick, who made the prediction, estimated this year's enrollment would be two million more than last year.

Elementary schools will handle about one million more students; secondary schools, about 700,000 more; and colleges, about 230,000 more.

* * *

ANOTHER HIGH: School children achieved a record high of money on deposit in school savings accounts at the close of the 1959–60 school year, according to the American Bankers Association. They report that more than six million students representing 17,000 schools had $234,620,000 on deposit.

* * *

LABS DOMINATE: The National Audio-Visual Association convened in Chicago to meet "The Challenge of the Sixties" and to exhibit the latest achievements of the thirty-year-old a-v industry. A record turnout of 980 registrants (a third more than last year), plus a one-third increase in the number of exhibitors established the 1960 meeting (NAVA's twentieth) as the liveliest one of all.

Most significant was the strong showing put on by language laboratory manufacturers. Twenty-seven firms making either equipment, furniture, or the complete lab were on the floor exhibiting. (In 1958, two lab firms exhibited; in 1959, twelve appeared.) Platoons of engineers and university researchers were prominent on the floor to explain the labs. Outgoing NAVA President Bill Kirtley attributed much of the interest in language labs to the "missionary work of the past fifteen years" of a-v people marketing sound recording equipment to educators.

Kirtley and convention keynoter Jim Hulfish noted that generally this year's a-v equipment was more compact and easier to use, in response to the needs of education. This seemed especially true of closed-circuit TV equipment and the appearance of a 16mm projector with reduced reel arms and simplified threading. NAVA officers predicted that next year's NAVA convention would see breakthroughs in smaller, more easily portable, simpler equipment in all a-v areas, especially film and tape.

In legislative matters, Kirtley was pleased with NAVA's record in Washington, noting the passage and Presidential approval of H.R. 4595, which allows teaching guides and scripts to be mailed along with film and tape materials. During the coming year, Kirtley believes NAVA's biggest job will be to keep alive the National Defense Education Act, which runs out in June, 1962. "But I think NDEA will become as permanent as the National School Lunch Program," he predicted.

Harvey W. Marks, Denver, Col., was installed as NAVA president for 1960–61 at the close of the convention. Next year's meeting place was still in doubt, for NAVA seems to have outgrown the limited facilities in Chicago's Morrison Hotel.

* * *

AFRICA: Responsibility for strengthening African colleges and universities for long-term service must be shared by the U. S. Government and private agencies. At the same time, they must increase opportunities for Africans to study overseas in order to meet African demands to join the modern world.

That was the consensus of African, British, and American educators attending a conference called by the Phelps-Stokes Fund to review programs affecting the education of Africans.

Participants felt that Africans will make the ultimate decisions on what priorities are desirable in education and training, as well as how trained talent will be used.

They also believe that a distinction should be made between academic training needed to produce scholars to transmit and add to knowledge and the training needed to prepare Africans for public affairs and practical pursuits. High academic standards should not be watered down in a crash program to extend educational opportunities for Africans.

SEGREGATION: School desegregation and civil rights issues are playing an increasingly stronger role in Southern politics, reports Southern School News in a special survey.

The school issue has dominated local and state elections so far this year in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, and Virginia, according to the paper.

Correspondents for Southern School News found that in the Deep South candidates differ on the segregation issue only in the degree of support for separation of the races.

The segregation-desegregation issue is a dead one in the border states, where most of the area's school integration has occurred.

These same issues continue to dominate the region's interest in national politics. The voters and political leaders of the South give most of their consideration to the race issue.

In significant action, the U. S. Third Circuit Court of Appeals has ordered Delaware's grade-a-year desegregation ended by 1961, a decision that could have repercussions in school suits pending in other states. The grade-by-grade plan, in effect since last September, will be allowed to continue until September, 1961, when a full integration plan goes into effect.

But in Texas, the Houston school board has been ordered to integrate its schools a grade a year for the next 12 years starting this month. Federal Judge Ben C. Connally, in issuing the order, sharply criticized the school board's plan for integrating only three schools.

Houston is the largest segregated school district in the nation with 173 schools and 170,000 pupils. About one-quarter of them are Negro.

In Louisiana, officials are moving in state courts to block a federal court desegregation order for New Orleans public schools. Civil District Judge Oliver P. Carriere granted a preliminary injunction that prevents the Orleans Parish school board from integrating schools on Sept. 8.

The decision is certain to set up a legal battle between state and federal courts, since a U. S. District Judge previously ordered the board to integrate and provided the plan under which it was to operate.

Elsewhere:

- Arkansas—Gov. Orval Faubus crushed four opponents to gain an unprecedented nomination for a fourth term. The campaign was based principally on his policy during the Little Rock school crisis and other school desegregation matters.
- Florida—Dade County, which began some integragration at two schools last year, assigned two Negro students to two other all-white schools for this term.
- Georgia—A Fulton County grand jury recommended segregation by sex in Atlanta's high schools in event of racial desegregation.
- Maryland—The continuing migration of southern rural families into Baltimore was reported to be causing rapid racial turnover in schools, overcrowded classrooms, and revised teaching methods.

* * *

CALL FOR CHANGE: A new approach in the teaching of law has been called for by Dean William C. Warren, of Columbia University's school of law. Warren favors shifting some of the present emphasis from the study of casebooks to broad, integrated courses of "problem seminars."

He said the traditional method of studying law by casebooks was satisfactory for first- and second-year students, but was a questionable practice for students in their final, or third, year of study. Questioning the value of this method, Warren said, "Once a man has become reasonably adept in the handling of case and statutory material, the method does not provide intellectual stimulation in proportion to the time devoted to it."

* * *

AGREE ON NEEDS: College trustees, professors, and presidents see eye-to-eye on three major points, a survey conducted by the Council for the Advancement of Small Colleges reveals.

They are the need to increase enrollments, to pool resources, and to increase faculty pay.

Results of the questionnaire conducted among 63 CASC colleges marked the wind-up of a three-day workshop at Augusta, Maine.

Commenting on the rapid growth of member institutions, Dr. Alfred T. Hill, CASC executive secretary, said they are expanding faster than their own projected figure of 60,000 students by 1970. The colleges, which had combined enrollments of 32,000 in 1956, will reach their goal by 1965, if the present rate of expansion is maintained.

Hill stressed the need for the small schools to pool their resources. "It's one way of enabling them to offer resources of larger colleges while still retaining the other advantages of their size."

* * *

NEW TESTER: The American College Testing Program, newest agency to enter the school testing field, reports that 368 colleges and universities participated in its first year of activities. More than 125,000 high school students took the ACT test in the same period.

ACT estimates that test scores were sent to more than 1,000 colleges throughout the country in which students expressed an interest. More than 6,000 high schools also received reports of their students' scores.

Along with testing for college admission, the new tests are aimed at guiding the student into proper academic courses. Jean Paul Mather, ACT's president, said the tests can "spare thousands of students the waste and anguish of academic failure by advising them to enter programs or institutions" for which they are suited.

* * *

NEW DEGREE: Adult students in the Greater Boston area will be able to earn Harvard's new Bachelor of Arts in Extension Studies starting this fall. Since 1933, Harvard has awarded only the Adjunct in Arts degree for study in extension courses.

Students will concentrate their work in three broad fields—humanities, natural sciences, or social sciences. Candidates for the new degree must pass 16 full courses with grades of "C" or higher in eleven of them. Courses are held in the evenings or on weekends.

EXPANSION: Expanded metropolitan school districts, combining both city and suburban systems, were proposed by a Syracuse University professor as one answer to the educational needs of the next four decades.

The suggestion was made by Dr. Richard C. Lonsdale, professor of education, who delivered the twentieth annual J. Richard Street lecture on the campus.

He suggested the creation of "an overlay kind of district," one superimposed upon continuing local districts which would retain most of their present powers.

"This metropolitan area school district would provide supplemental educational services such as pupil personnel services; vocational-technical, adult, and special education; research service; and community college where needed."

In addition, he explained, it would provide an equitable tax base, much like the federated school district plan proposed earlier this year by Gov. Rockefeller.

He based his recommendation on a recent report of the Urban Land Institute, which predicts that by the year 2000 the U. S. will be dominated by cities, that 85 percent of the population (then 320 million) will live in some 300 metropolitan areas each of 100,000 or more, and that ten of these areas will be super-metropolitan areas containing one-third of our total population.

* * *

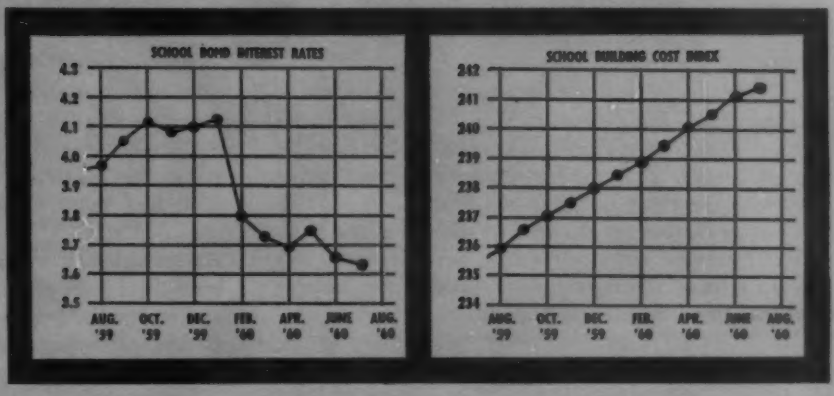
RADIO'S NOT DEAD: Although educators have been focusing their attention lately on how to utilize television to solve some of their problems, there's still a role that radio can play.

Convinced of radio's value, fifty educational radio station managers, meeting at the University of Wisconsin under the auspices of the National Association of Educational Broadcasters, have set out to establish a national radio network covering the whole country. First step will be to set up live educational radio networks in their own states and regions.

Participants also decided that, by taking advantage of the resources of the institutions of NAEB member stations, they could offer a unique service with such a network providing high-quality educational, cultural, informational, and entertainment features.

At the same time, NAEB has joined with the National

BUILDINGS & BONDS: School bond interest rates averaged 3.62% in July. Changes in bond interest rates could be triggered by actions of the Federal Reserve Board and business demands for bank loans. Building cost index rose slightly in July to 241.4.



School Boards Association in undertaking a survey of available broadcasting frequencies and probable space needs. Findings will be presented to the Federal Communications Commission to assure adequate air space. NAEB vice president Harold E. Hill believes that pressures for frequency allocations being exerted on the FCC pose a real threat to the future of educational broadcasting.

* * *

COMMERCIAL ETV: "Substantial commercial support" for educational television has been called for by Edward Stanley, NBC director of public affairs.

Speaking at a New York University summer TV-Radio Workshop, Stanley said education is one of the areas in which TV must greatly expand. "This has to be paid for if we want to do it on a truly mass basis, and for that there must be a substantial commercial interest," he added.

For one thing, the public needs a far better understanding of modern technology, Stanley said, and under commercial sponsorship interesting programs designed to explain and discuss science could become widespread.

Pointing up the need for educational TV systems in under-developed countries of Asia, Africa, and other parts of the world, Stanley said this was the only way that anyone could establish an educational system almost overnight. "It doesn't require the long-term training of hundreds of thousands of teachers or an investment of billions of dollars in buildings."

* * *

CAN'T COMMUNICATE: Lack of communication skills is by far the biggest shortcoming of college graduates, a General Electric executive says in the latest University of Michigan Business Review.

"Business is a world of reports and conferences and communication without end," declared John Spencer, GE manager of marketing personnel development service.

In a company-wide survey of more than 13,000 college graduates, English was cited as the most helpful subject among non-engineers and ranked second only to mathematics among engineers, he said.

* * *

FEWER MEDICAL APPLICANTS: For the third consecutive year, the number of students applying to the nation's medical schools has dropped. Acceptances by the schools have increased slightly during the same period.

In 1959, 14,951 students applied to medical schools; in 1958, 15,170 applied; and in 1957, 15,791 applied, according to the Basic Research Division of the Association of Medical Colleges. The number of applicants accepted has risen three percent since 1956.

Possible reasons for the decline: the end of the G. I. Bill, the expense and long years of medical study, and the glamour of other vocational opportunities in professional, technical, and scientific fields.

* * *

SPACEMEN AT MSU: Both the virtue and the necessity of breaking down traditional class scheduling were studied at a Michigan State University conference attended by 150 college presidents and planning officers. Director John Jamrich of MSU's Center for the Study of Higher Education presided and reported on a new study of the utilization of instructional facilities in a large number of midwest colleges. Agreement was reached that while mechanical application of utilization formulas should be avoided, utilization studies are essential in assessing the future needs for plant and in measuring the capacity of future and present facilities.

The study and conference were supported in part by grants from the Educational Facilities Laboratories.

* * *

MONEY AND QUALITY: School superintendents generally agree that there is a direct relation between amount of money spent for education and school quality. But they would like better guidance on the priorities to give such spending.

That was one of the conclusions of a national group of superintendents following a conference at Columbia Teachers College. Their recommendations were outlined in "A Charter for American Education in the 1960's."

The superintendents also want more attention given to educational research, noting that "industry spends three times more on research than is spent for all functions of public and private education in this country."

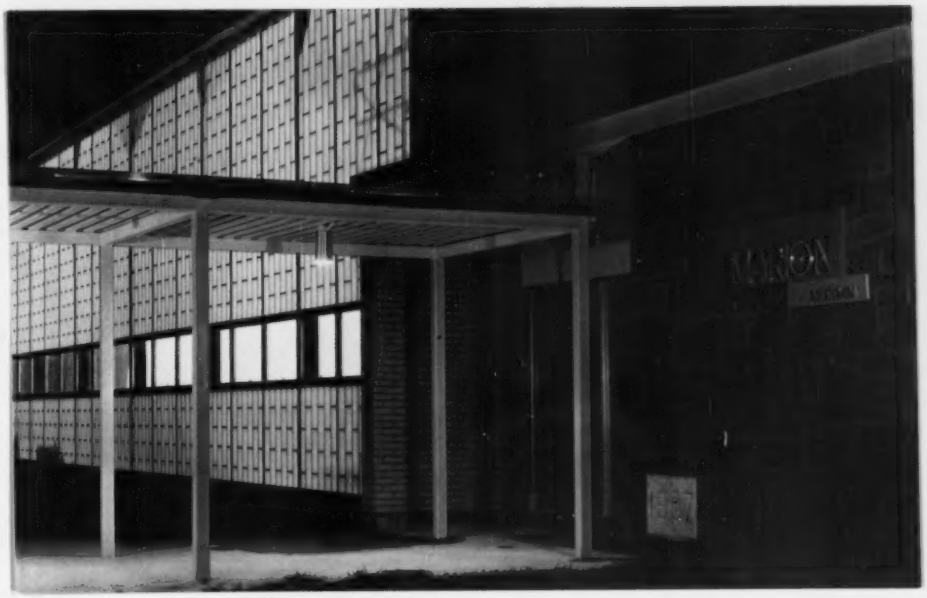
Discussing school evaluation and research, the charter notes that, "while quality in education is directly related to expenditure, more should be learned about the relation of money and effort to the results of education."

Superintendents also urged that every effort should be made to learn of promising programs in industrial classrooms and to study their potential for use in the public schools.

* * *

POTPOURRI: The Morton Salt Co. has come up with a new way of aiding local school districts. The company recently gave a ten-acre tract to the Mentor, Ohio, district for construction of a new school. Land was valued at $20–$26,000. . . . Two hundred fellowships for graduate study in 13 foreign countries will be offered by foreign governments and universities through the Institute of International Education for the 1961–62 academic year. Applications will be accepted until Nov. 1, 1960. . . . The University of Wisconsin has set up a new department of statistics which will offer courses for the first time this fall. . . . Undergraduate courses in communication science will be offered for the first time this fall at the University of Michigan. The only program of its kind in the U. S., it will deal with machines that code and de-code, information storage and retrieval in electronic brains, mechanical translators, and data processing. . . . New graduate programs in Brazilian studies and in the Portuguese language and Portuguese and Brazilian literatures will be offered this fall at New York University.

Circle OV-218 on reply card, last page



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VIRCO

Student Accounting By Automation

Is it possible to teach and assign homework the first day of school, to assign seats in study halls to two hundred students in one period, and to have the attendance rolls for a population of more than two thousand students within an hour after school convenes? To most school personnel, this sounds like Utopia, but such is the utopian situation at Rockford (Ill.) West High School, thanks largely to the brain power of an IBM electronic student-accounting system.

Now in its second year of operation, this system has proved a boon not only to the teachers, but to the principal, deans, counsellors, and office staff. After an initial period of confusion, natural for a radical change, we now find the system efficient and economical of time for all school routine. In the matter of record-keeping alone, the system has more than proved its worth.

The machine does not take the place of office personnel, but it provides more, and more accurate, services than we ever had. Time is required to plan and install the system and to train personnel to use it. Time is also needed to organize the data which the machine can process. Our office force, particularly the registrar, worked many months planning attendance cards, report cards, class lists, and other detailed information for the system.

Our machine is rented at a very nominal fee, and an IBM Service Bureau located in Rockford does our printing. Eventually, the city school board will have its own printer.

Attendance taking in a large high school is cumbersome, and usually absentee rolls are not available to the teachers until the following day. Under the new system, attendance is taken during the home-room period, IBM cards for those absent are sent to the office, and before the next class is dismissed, each teacher has a complete list of absentees for the day. Student cards in the deans' offices supply the address and phone number of each student. As soon as the deans receive the absentee lists from the office, they call the homes of absent students. This is an excellent check on our student body and has reduced truancy to a minimum.

Before school convenes in the fall, each student receives his program card by mail. It notifies him of his home room number, his class schedule, room number of each class, study hall period, and lunch period. Home room teachers, deans, and counsellors also get a copy.

On the first day of school, each

By J. E. Rose, principal of West Senior High School in Rockford, Ill.

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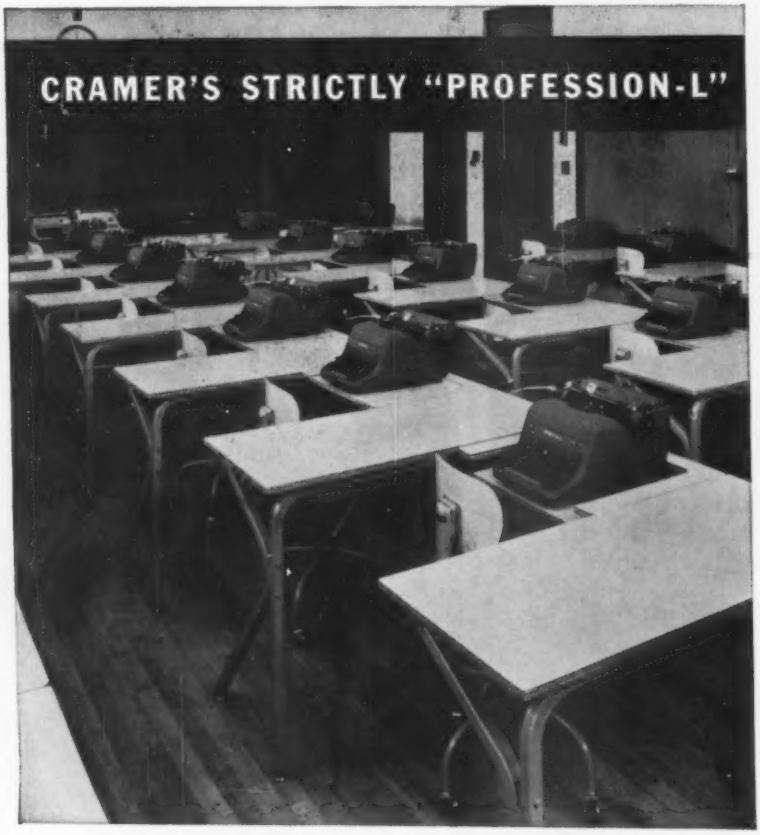

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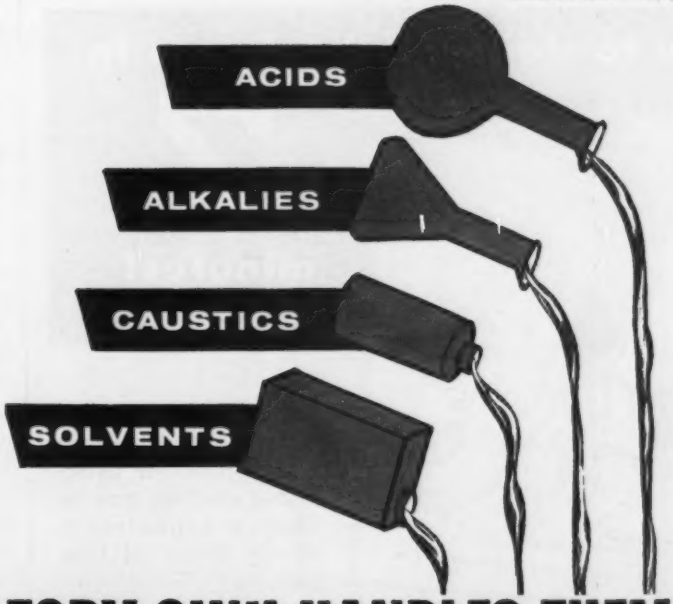

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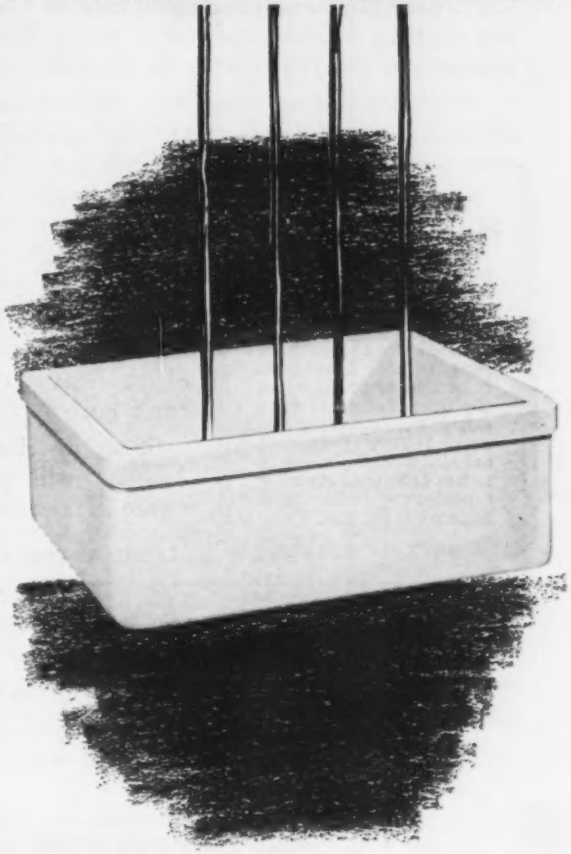

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CHEMICAL CERAMICS DIVISION

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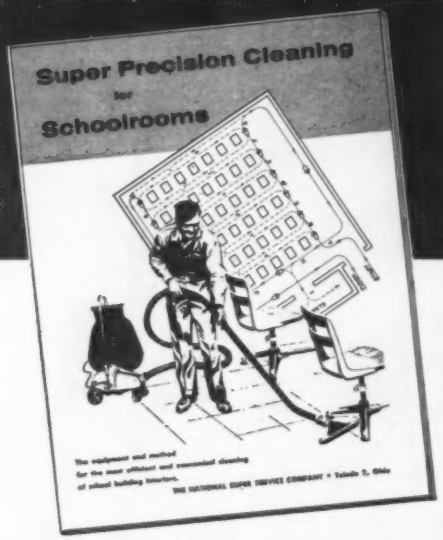
How to clean a schoolroom in 7 minutes!



Super has developed a specialized cleaner and a plan for using it that enables you to keep a schoolroom really clean at low cost.

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Automation (continued)

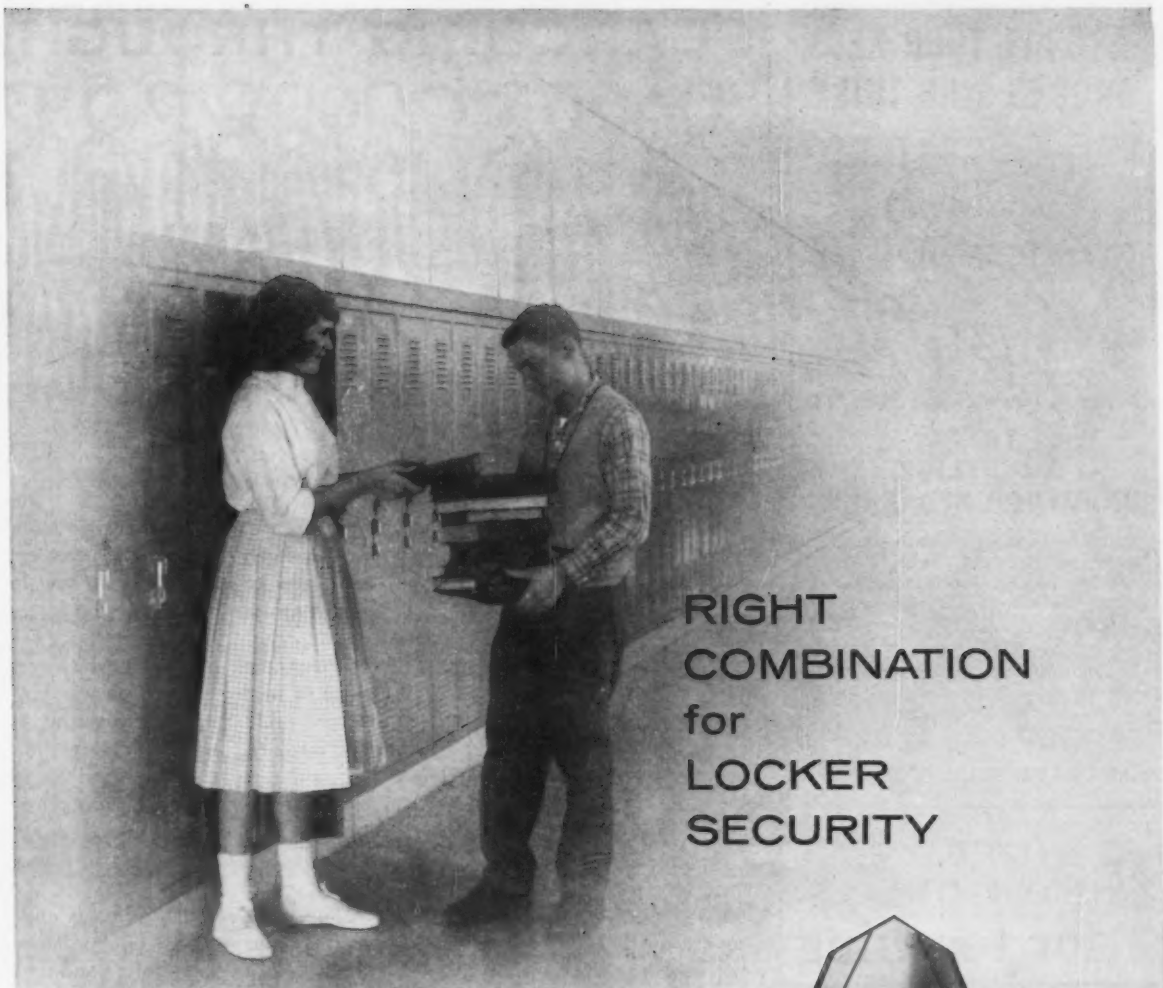
teacher is given an alphabetized list of the students in his classes plus their IQ and achievement test data. List in hand, the teacher can actually start teaching the first day of school. A similar system is used in the study halls, so that students are soon seated and busy.

We have five half-hour lunch periods during the fourth, fifth, and first half of the sixth periods of the day. Each student spends half of one of these periods in the cafeteria and the other half in the study hall. With information provided by the IBM, study hall teachers know immediately which students are in study halls each part of the hour. The machine also prints the days certain students are not to be expected in study hall.

The new system has been especially beneficial in issuing report cards. Each teacher receives the IBM report cards of his students at the close of each grading period. The teacher grades his students by marking the cards with an electronic pencil which can be "read" by the machine, and returns the cards to the office. The service bureau prints the report cards and these are distributed during home-room periods. Cards of students who have withdrawn from school or who have dropped the course are so marked and these cards are removed from the teacher's packet.

The by-products of the machine are many. When the superintendent called for a list of failures in beginning Latin, he was given the information within a few minutes. In a short time, the machine will give a complete list of sophomores, for instance, or a list of students in any one class, or in any study hall. It will separate the boys from the girls, list the failures, the incompletes, or those irregular in attendance. It is used to distribute lockers and to address mail to students' homes. Our registrar designed a card that was used last spring in registering junior high school students who will attend senior high school this fall.

There is almost no information in the way of statistics that the machine cannot supply. ●



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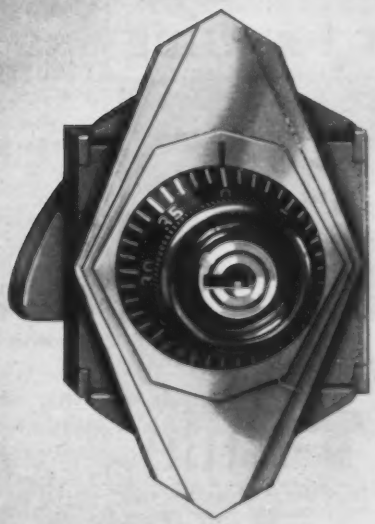

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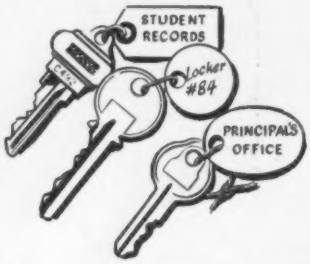

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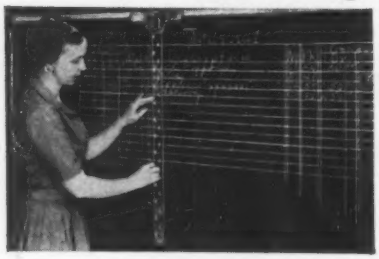

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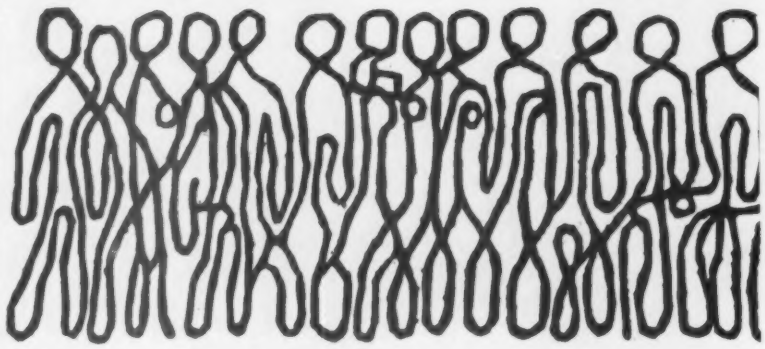
SEARCHING THROUGH



Cost of Creating A College Environment

MUCH THE MOST common method of research is the survey. Sometimes it seems to be conducted on the basis: "Let's see what everybody else is doing to be sure we're no better/we're average/we're above the median/we're not out of line." Occasionally it's to get ideas for improvement.

As every practicing administrator can testify, it's done by questionnaires ranging from postcards to twenty-page forms. Once in a while a sophisticated person learns in advance in what form data are readily available and his questionnaire can be passed over to the appropriate clerk. Most of the time it's not available in just the form required and the recipient struggles with his professional conscience over whether his obligation to the sender or the prospect of useful conclusions require him to take the time, energy, and resources to get it filled out.

But it's not the gathered data that determine whether the surveys are worthwhile; it's how the data are used. Take cost data, for example. Unexpected relationships often appear when costs have been carefully compiled and analyzed. Certainly honest and accurate price tags are essential to the well-reasoned decisions as between courses of action. They need not determine the course, but must be taken into account. For despite the repeated assertion that money alone won't improve our education, there are mighty few improvements that don't involve additional expenditure. The problem isn't how to not-spend, but how to spend prudently for maximum results.

An example of a study which cost a lot of money, one which was concerned pretty largely with getting at the facts, and which involved compiling data never before available in just the form required, is the recently published *California and Western Conference Cost and Statistical Study.*

This was a cooperative study initiated by President R. G. Sproul of the University of California and supported in part by a grant from the Fund for the Advancement of Education. It took more than money. It took several years of hard work by committees of academic and business administrators and by a central study staff. It took imagination and patience and faith in the ends.

The results, just published, justify the work. Behind them lay a monumental job of defining terms and standardizing classifications in a cross section of public and private universities, both large and small, widely distributed. Those who worked together included the University of California, Indiana University, the State University of Iowa, Michigan State University, the University of Minnesota, Purdue University, Pennsylvania State University, the University of Washington, Vanderbilt University, and Wabash College.

RESEARCH

From their joint efforts emerged a common language in which the participating institutions could describe and compare their operations. This was a major accomplishment which will make further studies and comparisons possible as well as provide for each institution more useful price tags for a wide range of activities.

A listing of the unanswered questions is promising. Good and useful research always raises and defines more questions than it answers. That is surely one of its major contributions. This study lists the following:

1. What effect does the overall size of an institution have on its unit costs of instruction? How significant are "economies of size" in higher education? Will unit costs continue downward as institutions grow, at least to a point, and is there any indication where that point may be?

2. What measures or guides can be used in analyzing such functions as research and public service, and what kinds of studies might be made of them?

3. How can the administrative and other supporting services of an institution be evaluated?

4. How can the effectiveness of different environments for learning be measured and compared?

The last question is the most important one and, unfortunately, the most difficult to answer. There are no generally accepted criteria for judging learning environments, to say nothing of the lack of methods and measures. Still, faculties and ad-

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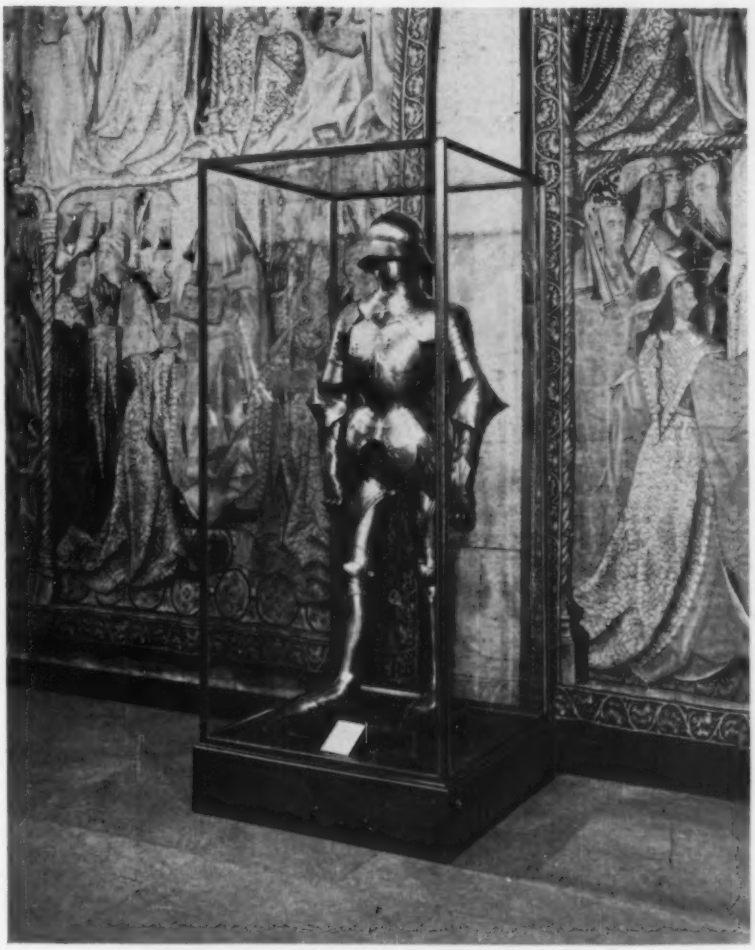

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HUNTINGTON

... where research leads to better products

Research (continued)

ministrators of colleges and universities are constantly called upon to make judgments in specific cases. Experience in the evaluation of learning environments is thus being accumulated, eventually to serve as a point of departure for objective measurement and comparison.

As new institutional studies supply the answers to some of the questions above, the continuing task before the faculties and administrators of colleges and universities—that of providing the best possible learning environments with the resources at hand—will be lightened. The choices among alternative environments, methods of creating them, and costs are wide. The right choices demand knowledge of all the components and skill in combining them for the greatest educational and economic effectiveness.

In other words, cost studies such as the present one are not enough. Studies of teaching methods and of the many and complex circumstances which contribute to effective teaching are even more important if the nation's institutions of higher learning are to meet the increasing demand for their services with resources available to them.

Reports . . .

Overtime Compensation for Exempt Employees, New York. American Management Association. 39 pp. $2.25 (members $1.50).

Study of School Districts which Rejected Their 1959–60 School Budgets on First Presentation. New York. The University of the State of N. Y., The State Education Department, The Division of Research. 20 pp.

One-Teacher Schools Today. Washington, D. C. Research Division, National Education Association of the United States. 75 pp. Research Monograph 1960-M1. Single copy $1.25.

Work Injuries and Work-Injury Rates in School Lunchrooms, 1958. Washington, D. C. U. S. Department of Labor, Bureau of Labor Statistics. BLS Report No. 159. 28 pp. •

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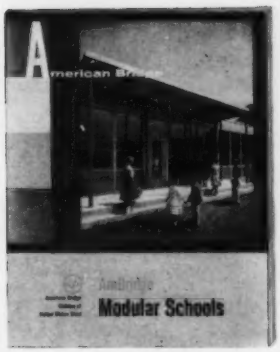

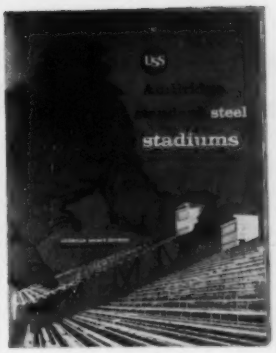

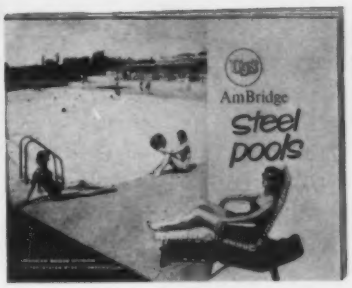

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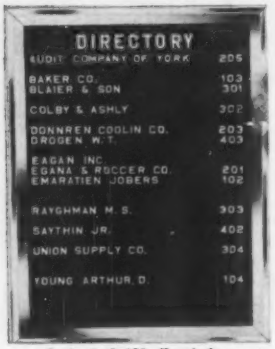

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CLOSE-UPS

Ruth Strang

A LIFE-LONG CAREER of developing the potentials of children will continue for Dr. Ruth Strang, in spite of her retirement this summer as professor of education at Columbia Teachers College. Although during her 43-year career she came to be regarded as a leading authority on reading, Dr. Strang's activities ranged into health and nutrition, psychology, and child guidance.

Having reached the mandatory 65-year-old retirement age this spring, Dr. Strang technically retired—but she just hasn't found time for it yet.

Dr. Strang believes that a professional career elaborates itself, and that as a person develops his interests, opportunities open. And that's what's keeping her future occupied. This past summer she taught mental hygiene and reading at the University of California and this month she will set up a high school and college reading program at the University of Arizona.

She had charge of a similar center at Teachers College to which youngsters with reading problems were referred. Dr. Strang believes that reading difficulties very often lead to other problems in a child's development.

The recent furor over why American children can't read is being disproved, according to Dr. Strang. Tests show there has been no decrease in reading ability. She does admit, however, that there is still room for improvement. "Everyone has a certain potential for reading that is not being realized. Everyone can read faster than he does." That's one reason she believes learning to read is a process that should continue throughout a student's education.

She's convinced that developmental reading programs should be stressed on all levels—for both children and adults. Speed is not the only criterion. Too many college students, she says, are poor in interpreting reading. "There is a great need for literal comprehension—reading between the lines and beyond the lines."

Johnny's best friend.

This broader approach to teaching reading—not merely as word calling—is gradually gaining wider acceptance, she believes. The fact that it is testifies to Dr. Strang's successful career as the nation's top reading teacher.

Harold P. Rodes

"WHENEVER A NEW president takes office, reactions range from one extreme to the other," said Dr. Harold P. Rodes at a dinner given by the board of regents of General Motors Institute. "There are usually some members of the staff who are afraid the new president will change everything, and there are those who are afraid he will change nothing. The end result is normally somewhere in between."

The occasion for the dinner was to introduce the new 41-year-old president of General Motors Institute to the regents and to give Rodes an early introduction to GMI department chairmen and other educators in

Eugene Field Elementary School, Springfield, Missouri • Matthews and Hillman, Architects & Engineers • W. J. Graff, Superintendent • F. A. Martin, Jr., Board President

SPRINGFIELD, MISSOURI BOARD OF EDUCATION PICKS LENNOX COMFORT CURTAIN

Some advantages of this modern ventilating and heating system are:

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Lennox Comfort Curtain's modular design easily fits the Board's requirements for future expansion. Since a central heating source is not necessary, each classroom can be ventilated and heated individually, with new units easily added when new construction has to be done. The Board also found Lennox Comfort Curtain to be highly flexible . . . able to ventilate and heat all sizes of rooms.

☑ ECONOMICAL INSTALLATION — OPERATION

Room-by-room installation kept initial costs at a minimum . . . (total cost was $1.19 per sq. ft.). Flues for exhausting combustion products were of the simple prefabricated-type, and simple openings in the classroom walls provided fresh ventilation air. Book shelf ducts were utilized, furthering ease of installation simplicity.

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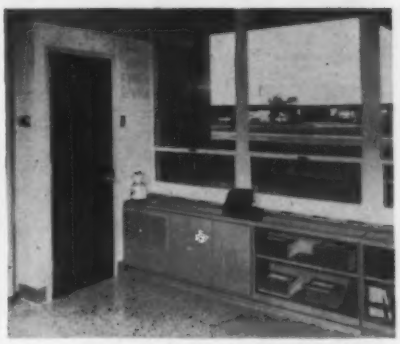
The air processing units in each room, meter precise amounts of fresh, heated or return air as required, filters it clean, and distributes it uniformly through the duct sections *across the full length of each classroom exterior wall.* Individual Day-Nite thermostats allow teachers to set and maintain room temperatures within ½° of control setting.



Comfort Curtain system blankets windows and outer walls to provide a barrier between room occupants and the weather.

Students stay healthier, more alert —teaching is more rewarding

It goes without saying that in the thermal environment created by Lennox Comfort Curtain, the side benefits are numerous. Teachers, students and administrators are happier and more efficient. Schools offering Comfort Curtain also find it easier to attract and keep qualified personnel. For complete information about the Comfort Curtain System and its adaptability to in-the-room, two-room remote, central warm air, hot water or steam, heat pump or electric heat sources, write LENNOX, 509 S. 12th Ave., Marshalltown, Iowa, or phone your nearest Lennox office, listed below, and ask for a Lennox technical representative to call.

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Close-ups (continued)

Flint, Mich., home of the Institute.

Rodes, who had accepted the Institute's presidency several months ago, this month takes over the administration of the cooperative engineering school, which, incidentally, is also 41 years old.

Defining his philosophy of administration in higher education, Rodes said: "I believe the major function of administration of an institution of higher learning, such as GMI, is to provide the best possible student body, teaching staff, and instructional facilities and then stay out of the way so that the really important work of education can take place unhampered in the classrooms, laboratories, and plants." This philosophy was derived from experience as president of Ohio College of Applied Science from 1951 to 1954 and as president of Bradley University the past six years.

Rodes will bring to the Institute a distinguished background as a teacher and educator. He graduated *summa cum laude* from Dartmouth in 1941 and subsequently taught high school in Vermont, served in the Marine Corps as a lieutenant, taught aircraft drafting in San Diego, lectured in mechanical engineering, and helped supervise a V-12 unit at the

Heads G.M. Institute.

University of California. He has also taught at Yale, directed student personnel at New Haven Junior College, and taught engineering at UCLA.

Rodes holds a master's degree in educational administration and a Ph.D., both from Yale. He belongs to American Society for Engineering Education and Engineer's Council for Professional Development.

The Institute, center for educational activities of General Motors, has an enrollment of 2,100 cooperative engineering students and grants degrees in mechanical, industrial, and electrical engineering. Each year more than 25,000 others get management, technical, and distribution training offered by the Institute.

Maj. Gen. Westmoreland

After two months in "Beast Barracks," the traditional term for a plebe's first summer at West Point, Maj. Gen. William Childs Westmoreland is digging in as the new superintendent of the U.S. Military Academy.

Gen. Westmoreland, 46-year-old

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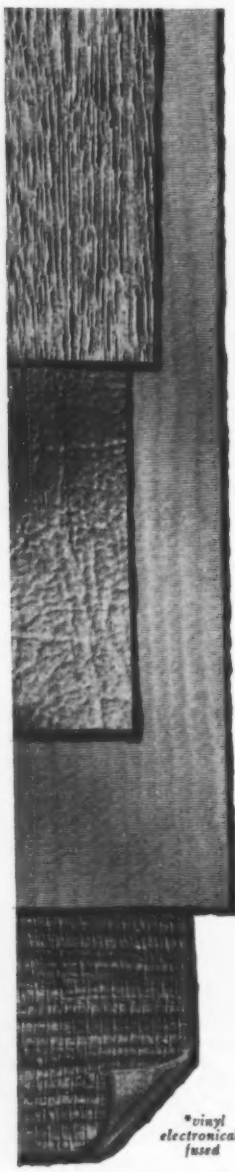

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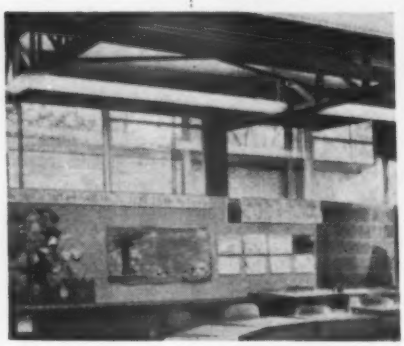

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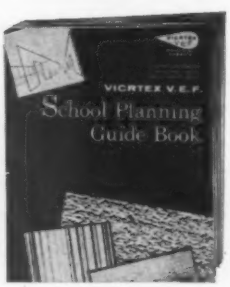

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winner of the Legion of Merit with two oak leaf clusters, is both a proved soldier and administrator. Veteran of the Tunisian and Sicilian Campaigns, the then-Col. Westmoreland walked ashore at Normandy on D-Day and stayed with advance units through to the Central Europe campaign and victory. During the Korean War, the Army awarded him his first star, making him, at 38, the youngest general officer in the Army at that time.

As a peacetime soldier, General Westmoreland has been an instructor at both the Command and Army War Colleges, commander of airborne infantry units, and, in 1954, a serious student in the Advanced Management Program of the Harvard Business School.

Gen. Westmoreland is the second youngest man to become "Soop" at West Point; the youngest was Douglas MacArthur. Both MacArthur and Westmoreland were "Cadet First Captains" of their graduating classes at the Point.

The class of 1964, first under the General's guidance, is the second largest peacetime class in the Point's history and the first to participate in the Academy's new curriculum. Planned and written into order under the previous superintendency of Lt. Gen. Garrison H. Davidson, the new curriculum places more emphasis on the humanities, making these studies of equal importance for the cadet as science and engineer-

MERIT RATING

One of the nation's largest corporations has developed a personnel-evaluation system that may hold significance for educational administrators who are under pressure to establish such systems in their schools. Read about this evaluation program next month in

OVERVIEW

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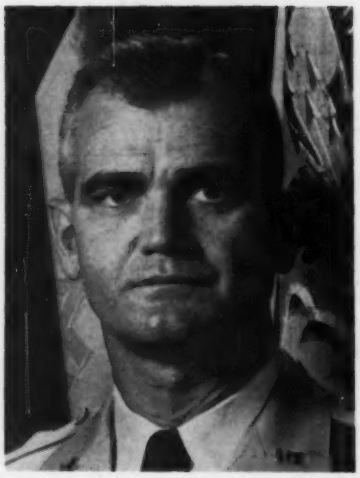
Close-ups (continued)

ing, should the student wish to concentrate in either area. Gen. Westmoreland, who was notified of his appointment only last May and assumed command on July 1st (General Order 49) was not involved in the curriculum change, but "I support it one hundred percent."

The General believes the Army today needs "a new kind of officer, a leader of men who can go overseas, work with local people, and conduct himself wisely and in the best interests of the country during really touchy international situations." He points with a good deal of pride to a breakdown of the class of 1964, his first. "These boys have already proved themselves a credit to their communities. Here, they will learn the business of being a credit to their country," the General says as he embarks on his term as their superintendent. (Term of command varies from two to four years.)

In the General's entourage is his wife (Katherine), two daughters (Katherine—11, Margaret—5), a son (James—6), and a second lieutenant as aide de camp. Together they will preside over the 16,000-acre national monument on the Hudson River. Off-duty, however, the General plans to continue his squash game and try to do better than 47 on nine holes.



New "Soop" at West Point.

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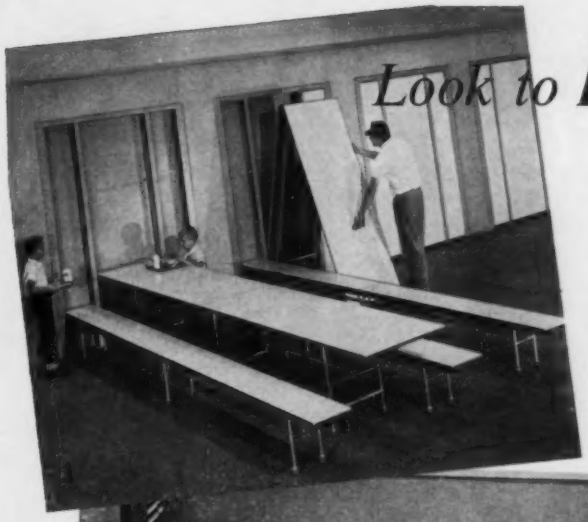
Candids . . .

San Diego County has five new school district superintendents for the coming year: **Sidney J. Colvin, Harold S. Packwood, Daniel L. Predovich, Jack M. Belzner,** and **Dr. Charles G. James**. . . . What's in a name department: **Charles O. Richter** has taken over the superintendency of Mt. Kisco, N. Y., upon the retirement of **George Richter;** no relation, however, except a deep concern for better schools. . . . **Dr. Ruth E. Smalley,** dean of the University of Pennsylvania's School of Social Work, has been elected president of the Council on Social Work Education. . . . **Alvin J. Roseman,** regional director of the International Cooperation Administration for the Far East, has been appointed assistant director-general of UNESCO. . . . **Harold L. Humes** and **Robert W. Cutler** have been elected to serve their second terms as president and vice president respectively of the Building Research Institute. •

Circle **OV-233** on reply card, last page



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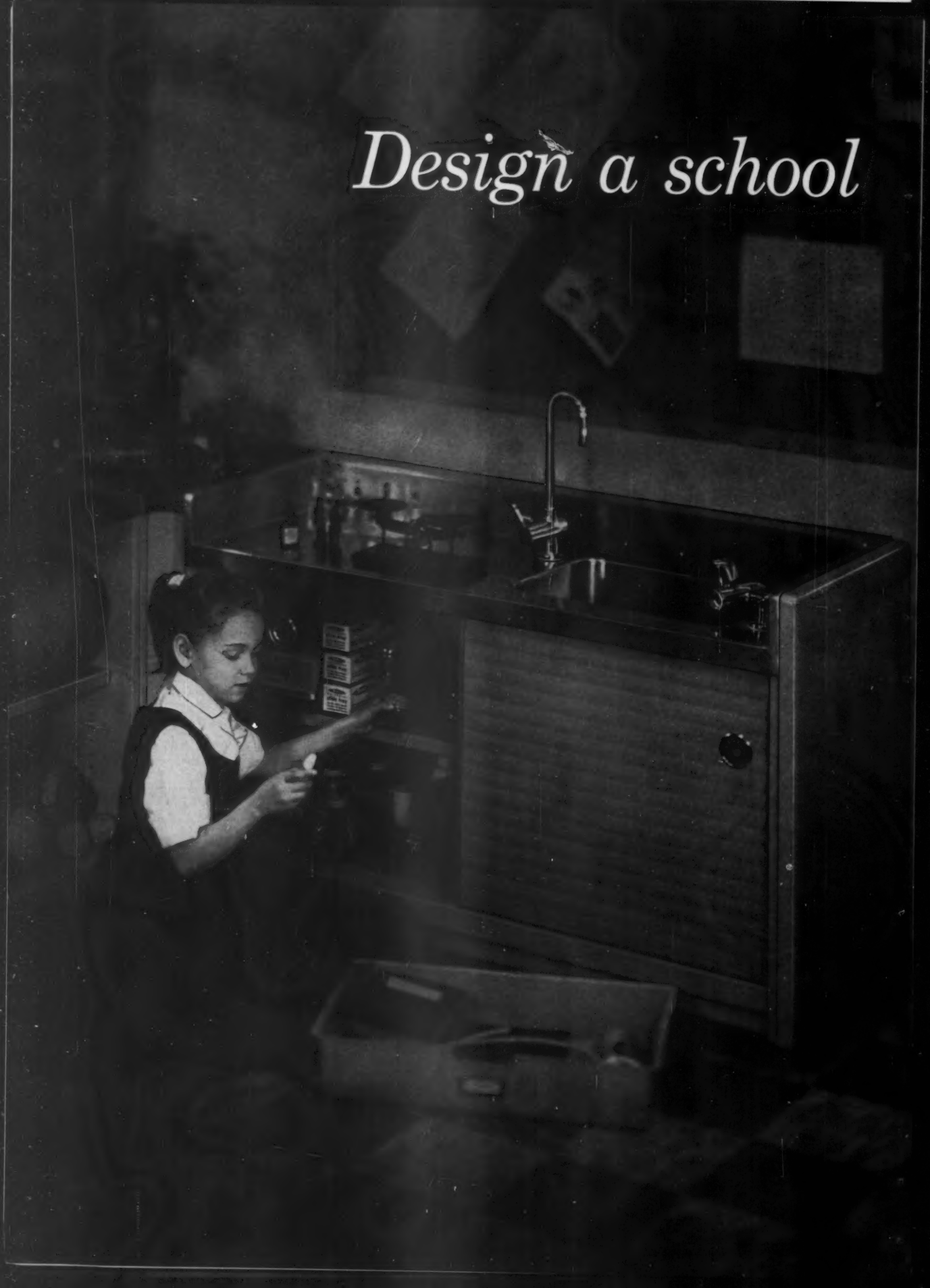

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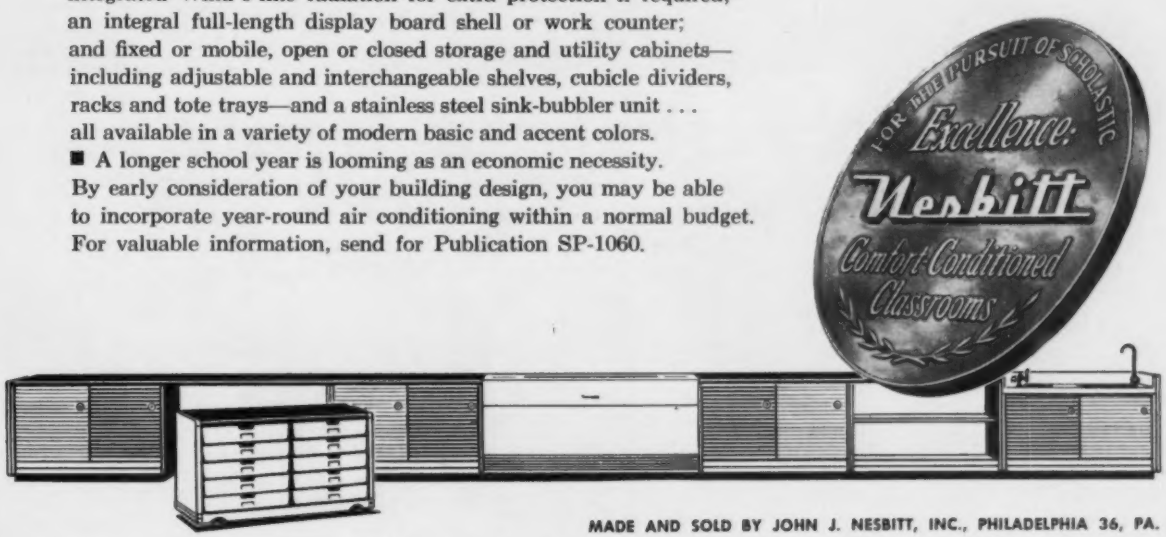

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THE CORPORATE CITIZEN

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A report on the emerging partnership between business and education

BUSINESS HAS a stake in education. Its recognition of that fact ranges from the dim feeling that things would be better if only the schools and colleges were doing their jobs "right," to the development of clear statements of company policy on training and education within the organization and on its relationships with education, public and private.

What it does about that stake relates as closely to its attitudes as to its resources, and is as varied as are the activities, organizations, and people we lump under the term "business."

Business depends on the competence and quality of people who are employees and managers, owners and stockholders, distributors and service agents, customers and clients, governmental officials and employees, and citizens and taxpayers—the governing and the governed. Education is the force which trains competence and builds quality in people. Its effectiveness is of crucial concern to business.

Business depends on the development of: *basic knowledge* which grows as men are free, curious and competent to explore, to search, to question; *technical or applied knowledge* which comes when men are looking for better ways of doing planned tasks, for new ways of meeting basic needs of humankind, or sometimes just for some practical application of something new and exciting; and *operational knowledge* which comes when men derive generally applicable rules which make possible more efficient organization of resources, better prediction of probabilities of consequence to alternate courses of action.

All three are in the province of education. Even the largest corporation dare not depend solely upon its own organization and resources for any of the three, but in greater or lesser degree calls on educational institutions for help.

Just as the word business is a catch-all, so education covers a multitude of activities and institutions.

Within the corporation at the very minimum there is training of new employees, even if highly informal or of a show-the-new-man-around type. Paradoxically, as labor-saving and automation have grown they have brought with them a new urgency for training. There's no great loss in a single spoiled unit in a handcraft job—and close supervision keeps the loss down. But in a mechanized flow, the possibility of expensive damage to a large number of units and, worse, to the machinery itself makes pre-performance training essential. Because of the increased mechanization and specialization of machinery most companies of any size do their own training —and re-training as new skills are needed.

Up-training is an increasing obligation, too. At Inland

THE CORPORATE CITIZEN

Steel's Harbor Works plant, with some twenty-one thousand employees, Vice-President Rich pointed out that "last year more than thirteen thousand people participated in some aspect of learning or education, ranging from on-the-job training to advanced management programs." OVERVIEW's January issue presented a partial picture of this growing world of Education at Work.

CUSTOMER-TRAINING is an old-timer. In 1915 the man who bought an automobile was taught by the salesman to drive it. Today in some lines this cannot be left to salesmen. IBM reported giving more than one hundred thousand training certificates to customers last year. At Friden Educational Center in Rochester, N. Y., training director Henry J. Lindsay reported sixty-five courses in the first six months of 1960—well over half of which were customer courses.

The in-business training and education program is huge and growing. It was said on competent authority that one of our major corporations spent more on education last year than the entire budget of Harvard University.

Closely related are the cooperative, occupation-centered, and commercially-established educational programs, such as those sponsored by the American Banker's Association, the Life Underwriters, the American Medical Association, and independent consultant organizations which will arrange anything from a one-day meeting to a full continuing program for a major corporation. To underline the importance given education by leading executives, it should be noted that the Young Presidents' Organization made of its 1960 week-long meeting a university of well planned courses with professional teachers and resource people.

These activities, within the corporate structure and in alliance within the business world, are obviously self-serving and an unquestionably appropriate use of corporate funds. Most well-established programs weather well any short-term period of low profits, but several directors of executive development programs reported to OVERVIEW that appropriations for their programs were among the first to feel the effects of actual or prospective drop in business income. If the stake is large, they imply, the commitment is still uncertain.

IN ITS RELATION to public schools, business acts like citizens generally. Just as the transferred executive with a young family looks for the community with good schools, so does industry in selecting a new plant site. Those with experience in expansion want to be able to attract some of their key young-comers to move in. The day is gone when a large reservoir of labor, unemployed and available, made the difference. Now most industries need to be sure of an adequate supply of reasonably well-educated people to do the increasingly mechanized work of office and shop.

But like many homeowners, business often looks for bargains in local tax-rates—and when it has settled it may quickly develop a tax-consciousness which works in the direction of defeating the very school quality that attracted it.

Fortunately it is rare for a business to make an open show of power. It does happen. Only recently a large oil company was reported to have vetoed the proposed school budget of a New Jersey city with a threat to move out. For years many one-industry towns suffered far worse from steady, quiet domination. But on the whole this picture has improved. The great unloading of "mill houses" and boarding houses by factories and mills during the depression made the company town less dreary and company domination far less frightening than it once was.

On the other side of the picture is the good-citizen corporation. Herbert W. McKelvey, superintendent of schools in Portsmouth, Ohio said: "When you think of all that's being done for education by business it takes in a lot of territory." He cited business-industry-education days, materials provided local schools to inform them about the steel industry, company employees teaching adult education courses, open-house day for children to visit the plants, the company management club's heavy contribution to the area's school for retarded children, and both strong support by management and cash contributions by the company for the community scholarship board.

IN NEWTON, IOWA, Superintendent D. D. Dunlavy reports that five of his teachers are attending summer school with the help of $300 scholarships from the Maytag Company Foundation. The Foundation works closely with the schools to make teaching in Newton more attractive. Besides the scholarships referred to, the program provides travel and convention grants, tickets to cultural events, financing of outside speakers and consultants, and presentation of an annual distinguished-teacher award.

Schoolmen have two reservations about most such programs. All too commonly, as in the provision of instructional materials, there is a one-way slant to the help. Then there is the fundamental question of control. Few will hesitate to take gifts for such worthwhile purposes as in the Newton program, but the nagging question persists. If these are good, shouldn't they be supported from the taxes of all? Does the company itself look to outside donations in its efforts to make its personnel policies attractive? Like the PTA gifts of audio-visual equipment, or the tax on parents for the co-curricular program, these do reduce the free and public nature of public education.

The most startling story of the educational concern of business is in the tremendous increase in direct contribution to institutions of higher education. It is doubtful whether the total sums involved begin yet to compare with the older scholarship awards, which have grown greatly in the fifties as more and more businesses felt the pinch in personnel.

According to the Council for Financial Aid to Educa-

American Management Association

"Even the largest corporation dare not depend solely upon its own organization and resources for either basic, technical or operational knowledge, but in greater or lesser degree calls on educational institutions for help."

tion, Inc., total corporation giving to American colleges and universities rose from about $24 million in 1948 to $136 million in 1958. In the same years there grew up a pattern described well by John A. Pollard in the May/June issue of the *Harvard Business Review.* (Reprints of his article, "Emerging Pattern in Corporate Giving," are reportedly available still.) Pollard concludes that business "must help to nourish the main sources of educated manpower," and raises the bogey of federal support (presumably from taxes on corporate and personal income) unless the individual corporations take hold. He predicts that eight hundred thousand American business concerns will be contributing at least $500 million a year to higher education by 1970.

Besides direct contributions, colleges and universities present an invaluable research resource for business. A brochure *Partners in Research: Industry and the University of Arizona in Tucson* sums up and exemplifies the mutual benefits of such a resource. President Richard A. Havill of the University expresses their interest in cooperating with industry and research problems and cites extensive programs already in existence. For all but a very few of the largest industrial companies only a university can muster the talent resources and experience for a wide range of research projects.

In turn, community colleges as well as great universities are constantly adding equipment contributed by concerned corporations to their research centers.

The list of corporate activities expressing business' stake in education is much longer and more varied than can be detailed. It ranges from the clearly self-serving training functions whose immediate worth is measurable in earnings to the kind of giving which is based on a broadly defined social responsibility.

THE BUSINESSMAN is tied to the stake of responsibility encircled by the fires of conflict. General Electric's Richard Eells called it the dilemma of corporate social responsibility in a brilliant speech before the National Conference on Solicitations in Chicago. He pointed out that it is a dilemma that confronts any business organization, regardless of size.

If the corporation limits its role to that of the profitable production of goods and services, executives must reject many of the responsibilities urgently pressed upon them. But in so doing, in failing to safeguard the environmental conditions of its survival it may be in danger of eclipse as a business institution.

On the other hand, when the corporation begins to take on more and more of the responsibilities of man in his society, the implications are staggering. Is it, he asks, in the interests of the good life that the corporation should become a microcosm of the Great Society, a lesser society which by nature must be identified with the whole of life? Can a corporation become totally involved without making a total claim?

Or more immediately, is a corporation a social institution at all? Is it a citizen, or only a legally established device owned by stockholders to make profit for stockholders? The issue is a real one, and both sides have cogency and elements of public weal to muster in their behalf.

Fortunately, as Eells clearly shows us, the dilemma is not an either-or proposition. The business corporation is essentially an economic institution with a limited role to play in a society of innumerable free and voluntary associations. The social responsibilities of the corporation have not replaced the corporation's responsibilities to the stockholder. Profit-making and social responsibility must go hand-in-hand and no formula nor imagined correspondence with a neat economic model will take the heat off the corporation executive.

Social responsibility is one more fire in the circle of fires of duty to stockholders, duty to employees, duty to consumers, duty to family, and duty to conscience which makes the seat of decision-making in modern American business a hot seat indeed. •

Bridal Suites in the Ivory Tower

THE POST-WAR college campus blossomed with Quonset housing for married students and baby prams on the greensward. It was not politic or patriotic to reject the married GI student. That generation has departed, but it set a precedent of married undergraduate life.

The precedent has given colleges and universities, and deans of students in particular, a new problem. Should they permit undergraduates to marry and remain in school, or will the effect of marriage be too burdensome to the student and detrimental to school life? As Dean Linton of George Washington University has aptly phrased it: "Nature being what it is, many of our married students have children, with the consequence that colic plays a larger role in their lives than the bucolic."

To determine the seriousness of the problem, four questions were posed to deans of nineteen colleges and universities: Alaska, Barnard, Carleton, Brown, Chicago, Colorado, Columbia, Cornell, Denver, George Washington, Hawaii, Ohio Wesleyan, Oregon, Pennsylvania, Stanford, Temple, Texas, Wellesley, and Yale.

1. Do you feel that benefits of college education are in any way affected by marriage during undergraduate years?

2. Do you provide special quarters, allow special privileges, or exact any penalties from married students?

3. Do you feel that married students add to or detract from campus life, classroom activities, and extracurricular enthusiasm?

4. Do you feel that marriage on the undergraduate level puts too great a burden on the wife?

The consensus is that: marriage has a stabilizing effect on study habits and gives more purpose to education; married undergraduates lose the intangible benefits that come from the "bull sessions" and informal associations that are vital to the American college; married students are isolated from the college community to the extent that they cannot contribute to college life; marriage brings with it, prematurely, financial obligations that can interfere with youthful college living.

Most colleges feel that undergraduate marriage should be discouraged but do not impose penalties.

1. *Are benefits of college education affected by marriage during undergraduate years?*

Marriage, they agreed, increases the application to learning but detracts from those activities which are part and parcel of campus life in the United States. With the qualification that financial demands arising from family needs might affect the number of hours that could be devoted to study, the deans believed that the settling effect of marriage is conducive to serious work.

Witness the response elicited from the University of Alaska:

> There is considerable evidence that the benefits of a college education are affected by marriage during the undergraduate years. The married student is more likely to recognize the importance of employing his time, his talent, and his energy.

Some expressed qualms about the effect of marriage upon the less definable aspects of student life. The whole college pattern, as one reply put it, is geared to single students.

Mrs. Altman is producer of the NBC forum, "Teen Talk," telecast from Washington, D. C. Mrs. McFarlane is her research associate.

by Sophie Altman and Dorothy McFarlane

Ohio Wesleyan made a cautionary remark:

> Starting married life while either of the couple is in college is not the ideal beginning. The life of a student is unique to anything else he will ever do. The disadvantages of undergraduate marriage outdistance the advantage.

While Yale's attitude was qualified:

> Some benefits are gained and some are lost by undergraduate marriage. Optimum college education is divided between the processes of communication and contemplation. Clearly a student who gives up living with his classmates loses some of the potential advantages of the former. On the other hand, he probably reduces the amount of time spent in social activities and thus gains time for reading, writing, or just plain thinking. And so here, it seems to me, honors may be even.

Wellesley felt strongly about the loss suffered by a student who marries during her undergraduate years. The dean pointed out that college is more than just books:

> We have found that it is preferable for our students to savor to the full the intellectual, cultural, and social opportunities which are theirs as college students, and only after that to devote themselves to their responsibilities as wives, mothers, and citizens.

INTERESTINGLY, NO college imposes a penalty on undergraduate marriage—a far cry from the days when marriage meant automatic expulsion. On the contrary, some schools take the special needs of married students into account and provide family quarters for them at regular or reduced rates.

2. *Do married students add to or detract from campus life, classroom activities, and extracurricular enthusiasm?*

Here, opinions are divided. In general, they held with Oregon's "extracurricular enthusiasm tends to be somewhat lukewarm," Hawaii's "unable to find time to play an active role in the campus scene," and Chicago's "very few participate actively."

This lack of participation can be construed as detrimental to college life, particularly if the number of married students grows to sizeable proportions. Where students limit their interest in college to academic work, they tend, as Wellesley says, "to make no contribution to campus life or extracurricular enthusiasm," and, in that sense, no contribution to the education of their classmates.

George Washington puts it more bluntly:

> I think that campus life and extracurricular activities suffer from the presence of a great number of married students.

While Carleton College, which does not have any married students, thought in terms of the added costs imposed upon the university:

> The presence of married people and their families introduces enormous difficulties for the administration and financing of higher education, burdens which I believe ought not to be borne during these times of already sufficient difficulty for educational institutions.

BUT THE position was also taken that married students have had a maturing effect on the American college campus and have helped de-emphasize the "rah-rah stuff of twenty years ago." One dean even tossed out the suggestion that an all-married student body might "provide an ideal classroom educational atmosphere."

3. *Does marriage on the undergraduate level put too great a burden on the wife?*

Some schools doubted that the student wife has a greater burden of responsibilities than the student husband. But it was admitted that when financial limitations are imposed, it is the wife who will quit school.

Barnard, of whose 1959 class over nineteen percent were married, felt sanguine about undergraduate marriages, despite the lack of special privileges or special quarters:

> An undergraduate who marries faces greatly increased responsibilities, but these are compensated for in a good marriage by peace of mind and security. *That* problem at least is solved and most girls have plenty of time for housekeeping in addition to college work.

Interestingly, there was little difference between the responses of women's and men's colleges and co-educational universities. Wellesley and Yale both disliked the idea of undergraduate marriage, as did such co-educational institutions as Carleton, Cornell, George Washington, and Ohio Wesleyan. Location of the school in a big city, where off-campus residence is the norm, might be one of the reasons for the indifferent attitude of schools like Barnard.

The steady rise in undergraduate marriages indicates that they were not just a GI expedient. While the number has not yet reached unmanageable proportions it is becoming a nuisance factor for many colleges, requiring that they provide special residence quarters and change campus restriction. In time, their numbers may significantly change traditional American campus life. ●

THE SUBVERTED CLASSROOM

Here is what "back-to-school" means in a police state

by Richard Evans

As you read the reports on the "subverted classrooms" in Red China, the United Arab Republic, the Dominican Republic, and East Germany, you will see the pattern that takes shape in underdeveloped and occupied countries throughout the world. The people revolt against an authoritarian regime or, as in the case of East Germany, are relieved of such a regime through war. A "people's government" emerges to take power. New leaders begin to "rehabilitate" the nation. They establish a state-controlled education system as a base for economic rehabilitation.

If the nation is underdeveloped, the government faces first the vast problem of overcoming illiteracy. If it is occupied, the first educational problem is to indoctrinate the populace in the "correct" ideology. In the guise of preparing the people for self-government—but actually to exploit education as an economic resource in the service of the regime—these leaders build a totally controlled education system.

Education in each of the four countries clearly reflects such a process and suggests how individuality is systematically stifled in the service of collective gains.

In East Germany, the techniques of ideological rehabilitation are sophisticated, subtle. More direct methods of persuasion are employed by the Dominican Republic in the elementary context of reducing illiteracy and overcoming poverty. Education in the United Arab Republic must work within a framework of complex international pressures and around the government's need to develop unity through nationalism. Red China has drawn up a master plan of total ideological indoctrination, woven deeply into every phase of education.

Educational upgrading of the population in an authoritarian climate begins dramatically. Once the people are indoctrinated and made literate, a higher order of creativity is necessary; this is demonstrated in the Soviet Union which began at a level comparable in many respects to these four countries. When creative contributions are required to further national growth, "world view" elements must be introduced into education, since creativity emerges from a synthesis of different ideas. Soviet leaders recognize this and give their scientific and artistic creators considerable access to "outside" points of view, taking a calculated risk that this will not lead to rebellious dissatisfaction.

Reading the reports that follow can make us thankful to be educators in a free society, but it forces us into an unpleasant admission: there are subtle controls of academic freedom in our own education system that impose similar restrictions on our students and teachers.

Our nation has grown educationally to the point at which all of us should understand the importance of allowing democratic ideology to be studied openly within a context of other ideologies. Yet we seem to have regressed to a period of fear and of control of open discussion. We

have forgotten that learning about democracy does not mean indoctrination. We thus risk losing our advantage of providing the kind of freedom in which individual creativity—the greatest asset of any society—can flourish.

We can learn much from reports of subverted education systems and their inherent dangers to freedom. Most important, it should teach us how to capitalize on our advantage of not having to engage in classroom "subversion" to inculcate the democratic ideology.

RED CHINA

by Ron Whitehead Communist China is turning out "a new type of citizen" with which to build the socialist state and is training a corps of both "red and expert" scientific and technical workers and Marxist-Leninist theoretical workers. It is "universalizing" education to eliminate the difference between mental and manual labor.

By combining schooling and physical toil, the Red leaders believe that theory and practice are better integrated, the quality of teaching and study is raised, and scientific research is stimulated. This is their great gain over the "impractical bourgeois study for study's sake."

Mainland China's primary, secondary, and specialized schools enroll a hundred million youngsters. Besides the usual 3 R's and other subjects adapted to the needs of a technological nation, they learn to become "good Marx-Leninist Communists," to understand the theories of Mao Tse-tung, to worship above all things productivity, to cooperate with each other and "love" the masses, and to hate all "imperialist aggressors"—with special reference to their arch enemy, the United States, who "has stolen China's Taiwan," "pilfered her art treasures," and "stopped her from taking her rightful seat in the UN."

There is a big disparity in numbers between primary and secondary school attendances. This is due to the State's frankly admitted need of teen-age labor power. No more than about a million youngsters a year—one in ten—can be spared from industry and agriculture to attend secondary schools. But when agriculture is completely mechanized and industry largely automated, the regime intends to introduce a ten-year streamlined primary-secondary course which will graduate ten million students each year. And the promise is that they will have higher education available at least on a sparetime basis. The idea behind this is that pupils will graduate at age 16 to 17, just when they mature enough for real labor.

Red China's school system is patterned on the U. S. model, but the Communists have long since changed the substance of the curricula. They found it was much too slow and did not accommodate the kind of bureaucratic grip needed to meet their technical needs.

The teachers are thoroughly indoctrinated in the tenets of Communism. Their duty is "to break down superstitions and fetishes, to emancipate the mind, to mobilize the masses, and to do everything only after experimentation." They are required to follow devotedly wherever the Party leads, and the Party promises faithfully to look after their general welfare. The price of this "welfare" is a crushing regimentation.

The million or so fortunate Chinese primary school graduates who manage each year to qualify for secondary education (the maximum the State permits, remember!) go to establishments that are, on the whole, efficiently run and well equipped with up-to-date educational aids. Most of these are made in Shanghai's factories or are imported from East Europe.

The amount of work the students are expected to get through each day is prodigious. Their schedule would stagger any American high school student—and probably any other outside the Iron Curtain.

Their morning begins with tough physical training. There is a heavy load of academic studies, slanted particularly towards science, chemistry, and physics, to get through. At night there is homework. In addition, they must pursue "supremely important" political studies—the writings of Marx, Lenin, and Mao Tse-tung. There are discussions and activities to build up "team spirit," so notoriously lacking in individualist "Old China." Mutual and self criticism sessions (often used as punishment) take up more time. And finally there is the vital manual labor in either field or factory or on State projects.

Secondary school youngsters must assist whatever youth movements the Party may concoct to keep the people's minds off their hard living.

Chinese youngsters are good students and have a high native intelligence. The British in Hongkong train hundreds of them and can attest to their diligence and tractability. Consequently they are amenable to the strict regimen and discipline imposed by the stern taskmasters in Communist China's schools. Corporal punishment is practically unheard of. But cruel mental punishment is often resorted to by exposing any backsliders; the offender is either publicly criticised by his colleagues or must stand up and confess his own faults before all.

There have been many cases of suicide by the more sensitive who cannot stand the killing pace, especially among those with former "reactionary" family backgrounds singled out for attack.

But most of the Chinese, above all the children of peasants and workers (who have never known anything better or ever hoped for what they are now getting), take the strenuous regimen in stride. They even seem to thrive on it! Possibly this is because they come from physically tougher stock inured to centuries of hardship in which only the fittest have survived.

In any event the State does not care. Ruthless in its forward march to become the top world power by the end of the century, Communist China knowingly sacrifices nine million for every chosen million of its secondary school youngsters. It has no time for weaklings who may fall by the wayside as it rushes the horde of new experts on toward higher education, and their job of building up an automated industry and mechanized agriculture.

DOMINICAN REPUBLIC

by Bill Leonard

In every classroom in the Dominican Republic—the lovely, totally-owned island farm of Generalissimo Raphael Leonidas Trujillo Molina—in every home, in every store, in every public square, almost on every wall, is the portrait of one man—Trujillo. Loved, hated, and feared, he is Benefactor of the nation, Father of his country, and its absolute ruler.

Signs on all public works in the Dominican Republic proclaim the munificence of El Benefactor.

Down the road a half a mile from the El Embajador Hotel in the modern outskirts of Ciudad Trujillo are the new and exceedingly attractive buildings of the University of Santo Domingo. I went around to see one of the deans of the University. He listened to my perfectly straightforward story—that I wanted to learn about education in his country and that I had come to interview a number of teachers and students.

When I had finished, the dean politely said he would be delighted to assist in any way possible. However, he added, with the approving nods of several colleagues he had called into the room, I must first, of course, write a letter to Trujillo's Palace requesting permission to do all this. The dean was perfectly sure everything could be arranged.

I wanted to know if this specifically meant I could not ask any questions or get any answers until the Palace approved. Said the dean, "We pride ourselves on the absolute freedom we allow in the University—once approval has been given."

The University of Santo Domingo—which claims, incidentally, to be the oldest in continual existence in the Western Hemisphere—is attended by some two thousand Dominicans. Ninety percent of its support comes from the government. Tuition averages around $100 a year, depending on the particular college. Students are carefully screened for loyalty—and family loyalty—before admission.

On the surface, the students seemed a placid, attractive, and dutiful lot. But just as the iron hand of Trujillo lies under the academic robe (a bust of Trujillo the Educator dominates the University Plaza) so the University sheltered the hard core of the underground that was, at the time I payed my call, fomenting revolution.

The underground was being spearheaded by the younger generation of the Republic's best families—doctors, lawyers, students, priests. Of an estimated two thousand arrested by Trujillo in January of this year, perhaps a quarter were connected in some way with the University, as students or professors. The revolutionists were chopped down, literally, by the hundreds in a wave of mass arrests that touched almost every family in the nation. One underground leader hid out for two weeks in the dugout of the university ball park (it was out of season).

Education in the Dominican Republic, obviously, is rigid. But it ranks high on the Trujillo list of what's important. When Trujillo took over his two-thirds of the island of Hispaniola (Haiti is the other and poorer third) illiteracy may have been as high as ninety percent. A crash program—stepped up in the past seven years—has reduced this figure enormously. Everyone must go to school, theoretically although not practically, through the grammar school level. Schools are free. They range from roadside dirt floor shacks to reasonably modern functional buildings. Educational tools and equipment are still almost nonexistent. "After all," officials tell you, "we started from absolute scratch."

One day I sat in on a class for ten-year-olds. The school notepads all bore a likeness of El Benefactor on the cover. There was a bust of Trujillo in the classroom and, of course, a framed picture of Trujillo on the wall. The teacher, an attractive young woman, was saying the words, and the class was dutifully repeating after her, "Moses. Alexander the Great. Napoleon. Generalissimo Trujillo."

And so it went. "Education" extends right up through the older peasant class who are required to take reading and writing courses. One middle-aged couple with whom I talked in a country town called Moca said they enjoyed school thoroughly, and had for two years, although neither had yet learned to read or write more than their names. They had never heard of Eisenhower, Castro, or even Mickey Mouse.

But there were four pictures of Trujillo on the wall of their cabin to one of the Virgin Mary. "He is," said Maria Paulino, the lady of the house, "A kind of God to us."

Education is considered a rousing success in the Dominican Republic.

EGYPT

by Paul Gibbons

In the hot dusty classroom in Cairo's outskirts, the young male teacher nervously consulted his "national guidance" notes, then faced the roomful of forty restless teen-age boys. "We must never forget," he droned in a guttural Arabic monotone, "that occupied Palestine is an enemy base in our midst. It was established by the Zionists through an international conspiracy with the imperialists."

For one hour each week, pupils in this Egyptian secondary school hear the same line. So do some 120,000 other Egyptians teen-agers attending 210 secondary

schools (separate schools for boys and girls) up and down the ancient Nile Valley.

With a quick and grateful glance at the beaming likeness of President Nasser on the front wall, the carefully-rehearsed lecturer raised his voice for the climax of his weekly "national guidance" oration. "But always remember," he fairly shouted, "that Arab nationalism *will* win in spite of these imperialist-Zionist conspiracies against us. We *shall* triumph and march *forward* to even greater Arab glories under our wise and mighty leader, Gamal Abdel Nasser!"

The weekly political indoctrination course over, the forty teen-agers shuffled out to join schoolmates from other crowded classrooms for the regular weekly military drill. Under the barked commands of a young second lieutenant with a clipped moustache, the student body shouldered dummy rifles for a quick march twice around the school playground, then took turns at target practice with real weapons and live ammunition.

This was Egypt's "new generation" preparing for an uncertain future under a military regime that offers this curious justification for an annual educational budget of nearly $119 million:

"Education aims at infusing the new generation with the spirit and principles of the Revolution so as to develop strong and mature generations fully devoted to Arab nationalism."

Egyptian education officials resort to fuzzy jargon when questioned closely about the weekly political indoctrination courses. These lectures, they say, are necessary "to enable the student to realize in full the national truths in this momentous stage of our history."

One week's course will be devoted to Egypt's "victory" over the British-French-Israeli invasion of 1956. Though the tripartite forces withdrew at the insistence of the UN General Assembly—and not due to Egyptian arms superiority—the UN's role is carefully minimized, and sometimes omitted completely. Another week's lectures will deal with the early, though unsuccessful attempts of the Egyptians to rise up against the "foreign invaders." Israel invariably draws a bitter and emotional tongue-lashing. (All maps in Egyptian classrooms identify the state of Israel merely as "occupied Palestine.")

During the eight years of the Nasser military regime, the Egyptian school system has become a closely-controlled government propaganda instrument. One of the first acts of the military revolutionaries was the dismissal of all British teachers in state-run schools.

The Suez affair four years ago gave Nasser the excuse to "Egyptianize" schools (as well as foreign-controlled banks and insurance companies). All history and geography courses were "Egyptianized" to extol the glories of the nation's struggle against "imperialism."

At the same time, the government abolished all non-parochial foreign schools which it termed "intruding cultural islands." Religious schools were allowed to continue but had to provide equal facilities for Moslem students in Koranic and Islamic studies—meeting this additional cost themselves.

At one former British private school (now "Egyptianized") in a Cairo suburb, students complain that their "new" geography books do not conform with those available at the library of the U. S. Information Service —or even at some of the Egyptian public libraries.

There are also complaints about some English-language chemistry books which were published in the Soviet Union and shipped to Egypt. These books glow with praise for all Russian scientific achievements, carefully naming Russian scientists and the dates of their discoveries. Non-Russian discoveries are vaguely dismissed with such references as, ". . . and about the same time, it also was discovered that . . ."

By law all teachers in non-parochial schools must be Egyptians, and all courses (except for approved foreign languages) must be conducted in Arabic. Result has been an inexperienced teaching corps and untold confusion in trying to teach such complicated courses as mechanical engineering in the Arabic language which lacks many modern terms.

Except for the massive doses of "national guidance" regularly administered, the Nasser regime has taken the schools completely out of active politics. Before the revolution and even immediately after, Cairo University seethed as a hotbed of student demonstrations, many of them communist-led. In 1954, Nasser ordered a "clean-up" of schools and universities to rid them of their perennial agitators.

One of the "most important" resolutions on education recently adopted by the general congress of Nasser's National Union recommended: ". . . purging history textbooks of the lies and fake slogans fabricated by the imperialists, and projection of Arab glories . . ."

As one neutral educator observed: "How could any educational system work carrying a propaganda burden like that?"

EAST GERMANY

by Omer Anderson Last December Communist East Germany's Volkskammer — parliament — adopted, by customary unanimous ballot, a new education law designed to develop a new type of human being: the Socialist citizen.

Walter Ulbricht, East Germany's Stalinist strongman, then addressed the law-makers:

"It is no longer enough merely to provide the traditional theoretical instruction, which is walled off from real life and which provides only a single-sided intellectual education. Theoretical instruction must be strongly linked to Socialist reality. It is the task of the

Socialist school to develop human beings to whom work is the substance—the meaning of life—and the worker a figure commanding the supreme respect."

East Germany's "school reform" has abolished the traditional highly stratified educational system. The new law does away with the extremes of vocational Volksschule and classical education of the gymnasium.

In its place, East Germany is building a dynamic new educational system blending Soviet concentration on basic science education with the traditional classical education. Or so they advertise.

A visit to a typical East German classroom in the secondary grades—the Obersekunda at the Pestalozzi Oberschule in Dresden—proves that Communism, Western propaganda to the contrary notwithstanding, is providing highly efficient technical education, according to its dogma and fitted to its purpose. Here boys and girls study machine construction, electrotechnology, chemistry, physics, astronomy, trigonometry, and calculus. The study of Russian has been mandatory for all students since the fifth school year. Teaching of history takes the standard Marxist approach, as do economics and geography.

In history, for example, youngsters are studying the Paris Commune, the "first proletarian revolution"; in geography they learn about agriculture in the U.S.S.R. and the mineral resources and industry of Red China. They study British imperialism and the collapse of the colonial empire in terms of its economic significance.

Students must do janitorial and maintenance work in their classrooms, even major maintenance such as painting, masonry, and plumbing. And one day a week the class puts in a day of practical labor, as does every East German student, at an industrial plant. The Pestalozzi Oberschule has "adopted" the Dresden Boiler Works, which means that the entire school works at the boiler plant one day each week.

Education in East Germany is regarded as the "all-day" responsibility of the state. It monopolizes the time of pupils and students, restricting parental influence to the barest minimum. Every pupil is required to join the Young Pioneers, which regulates his free time in the early grades. From the Young Pioneers school children pass into the Free German Youth, which channels the energies of teen-agers into Communist activity.

Discipline is maintained largely by collective action articulated through blackboards or "wall newspapers." For in East German classrooms the bulletin board is used not primarily for announcements but for signaling out students for praise or reprimand. Corporal punishment is prohibited, but blackboard "knuckle-rapping" is rated as constructive criticism and so permitted.

East Germany encourages teachers to keep an eye on the homes of their students—to detect and report anti-state activity on the part of parents. Similarly, the Parent-Teacher Associations (Elternbeiraeten) mount surveillance on teachers.

Between 1954 and 1959 a total of 13,226 teachers fled to West Germany. This circumstance suggests East Germany's most critical education problem: the teacher shortage, which by 1964 will amount to ten thousand.

A vast teacher recruitment campaign is now underway in East Germany. Each school district has been assigned a teacher "quota" of thirty-five to forty. Since 1954 the East Berlin government has been pressing a nationwide program for the recruitment of teachers from industry: industrial workers between the ages of 18 and 35 who are trained for teaching positions in special two-year courses.

For example, in an East Berlin secondary school I watched Helga Brock demonstrate the operation of a lathe in the classroom.

Helga, 18, had been recruited from the Teltow Machine Works, where she works as a lathe operator. Now, in the East Berlin schoolroom, Helga was demonstrating her lathe to illustrate: (1) the worker-teacher recruitment campaign; (2) "practical education for Socialism," the theme of the new school law; and (3) equality of the sexes—East German Communist style. Looking on as the guest of honor was "Professor Dr." Alfred Lemmnitz, 55, East Germany's Minister for Public Education. Lemmnitz's academic title is in quotation marks because he is not a trained pedagogue but a linotype operator.

The new program is designed to bulwark the teaching ranks with the social element considered most loyal to the regime: industrial workers. This is how the East German Communist regime is solving the problem of ensuring politically-reliable teachers. Since 1958 all teachers have had to pass a two-year probationary period, production workers and honorably discharged veterans of the armed forces excepted.

At the end of the probationary period teacher candidates must be approved for permanent positions by committees jointly representing the Communist Party, the state labor union, and the education ministry.

Professor Kurt Hager heads the education section of the Communist Party Central Committee, and Hager has even more influence on policy than "Professor Dr." Lemmnitz—another cynical demonstration of the Party *über alles.*

OVERVIEW's authors: RICHARD I. EVANS is professor of psychology at the University of Houston and nationally known for his studies of the authoritarian personality. RON WHITEHEAD has covered China for twenty years; a former NBC correspondent; now Hong Kong bureau chief of Far East News Bureau and special correspondent with Australian Broadcasting Commission. BILL LEONARD has been with CBS NEWS for fifteen years; wrote and directed "Trujillo: Portrait of a Dictator," a CBS-TV documentary; well-versed in education (Bill has eight sons). PAUL GIBBONS is a Middle East specialist, working out of a suitcase for the past decade as a top free-lance magazine writer. (To protect the author, who had to file his story from Lebanon, we have given him the "Gibbons" pseudonym.) OMER ANDERSON has been covering Germany since V–E Day; former INS correspondent in Berlin; now Bonn bureau chief, North American Newspaper Alliance. ●

Teaching The Slow Learner

by David W. Beggs

ONE TO TWO students in ten can be classified as "slow learners"—those whose intelligence quotients measure above 75 but below 94.

The spotlight is currently focussed on the "gifted," the "academically talented," the "above-average." But the schools face an equally critical problem in providing meaningful and worthwhile educational experiences for those on the lean side of the ability curve. Roughly eleven to nineteen percent of our student population finds the assimilation of knowledge and the development of skills a difficult task.

The problem is greater today than ever before, particularly on the secondary school level. In 1900, only thirteen percent of the adolescent population graduated from high school; ninety-three percent of the nation's adolescents are in school today.

Furthermore, the educational and, thus, intellectual level of our society has risen. More proficient skills and broader knowledge are demanded of today's job-holders.

Much research now indicates (and most educational administrators agree) that the intelligence quotient is a questionable measure in working with students individually. Many students with low IQ's apply themselves so well, conform to teacher standards, and compensate with other abilities, that they do well in school. On the other hand, there are many students who have high IQ's but who do not put forth effort, who fail to follow prescribed instructional exercises, and who are not interested in school. To be valid, a mental measure of any individual must strike a balance between ability and achievement.

Once we have identified the slow learners, what kind of teacher and teaching method are best for them?

The really effective teacher is one who directs learning that contributes to the student's intellectual, social, emotional, and moral growth. To make these contributions to a student who learns with ease is challenging enough, but the instructor who can successfully work with the slow learner must have superior powers of understanding and employ special methods of instruction.

Most administrators want to assign their most capable teachers to slow learners because of the special skills required to reach these students. These teachers should be given extra time to prepare instruction for them. A teacher who is assigned a full-day classroom schedule will not have the necessary time to plan around the individual needs of her students or to check their progress against their potential.

How does a school provide for the slow learner? This must be done in terms of both course content and methods of instruction. In providing for the slow learner, teachers should follow this pattern:

1. Establish realistic course goals.
2. Present concepts that can be understood and assimilated.
3. Design activities, homework, and class and individual projects on the learner's level.
4. Use drill frequently with many variations.
5. Evaluate learning progress periodically.
6. Frequently review progress of material covered.

Too frequently the content of a course is determined

by the text assigned to it rather than by the needs and abilities of the students. Texts vary greatly in the amount of material they cover, in their vocabulary, and in their use of illustrations to demonstrate ideas. A sophomore book on world history suitable for a student of above-average ability may be impossible for the slow learner to comprehend. But he can profit from a different presentation of the same subject.

Using a simpler text with a reduced vocabulary, the teacher must still design individual work sheets for slow learners and present less detailed lessons.

Creativity is related somewhat to intelligence, as we commonly define it (the degree of ability represented by performance). This means that many students who are not considered intelligent can and do perform functions which are original, self-expressive, and spontaneously flexible. The alert school staff seeks to develop creativity as well as intelligence. Since the slow learner can be creative, he needs to have this facet of his ability polished.

THE CLASSROOM EXPERIENCES of the slow learner must be those that will establish a sense of security and confidence. He should be permitted to realize some degree of success in his school work. No student can have gusto for his work if it is always returned marked "F" or if the red marks on his papers show only errors and do not give constructive encouragement. (A red pencil can serve to praise as well as criticize!)

The essay question is an excellent way to evaluate the progress of slow learners. It gives them latitude in responding and it exercises their ability to express themselves, one of their most common skill deficiencies.

Drill must be used frequently, but not to the point of monotony. The master teacher often uses competitive drill exercises in which all students can experience some success. A note of caution, however. Since "drill" implies a conceptual lack of understanding, it it as easy for students to memorize errors as correct facts.

Recently an error was made in a biology class in matching some terms with their definitions, and a group of slow-learning students thoroughly memorized some wrong biological definitions! This is not as uncommon as it might seem; it further points up the need for careful classroom supervision by the instructor.

There must also be frequent course review for these students. Connecting events with facts and concepts is the key to successful instruction. Relating one learning experience with another helps them retain what they have grasped.

To measure the effectiveness of a school program, ability scores must be related to achievement scores. But one of the best measures of the school's effectiveness in providing for slow-learners is a low drop-out rate. A school with a high drop-out is obviously not making provisions for these students.

Employment prospects for the slow learner are not bright. This is hardly a surprise to either school guidance counselors or to industrial personnel managers; but the starkness of the situation can only be felt by the chronically unemployed or by the weary worker dulled by the repetitive process he mechanically performs—without understanding, without initiative, without goals to aspire to.

A spot check of several national business organizations provides a glimpse of the seriousness of the situation: "We don't hire students of this sort." . . . "Only the most menial of jobs available." . . . "No jobs where slow learners would be in contact with the public or have any major responsibility." . . . "Not looking for poor workers who will stay on the same job the rest of their lives."

The situation is serious enough today, but by 1970 it will completely overshadow the current crisis. In a decade, all types of job opportunities will have increased sharply—except those at the bottom of the skill ladder. Employment will increase most rapidly in occupations requiring the most education and training. Professional and technical workers will be up sixty percent; sales workers, up forty percent; and service, clerical, and skilled workers, up thirty-five percent. Opportunities for semi-skilled workers will increase by only twenty percent. There will be no change in the demand for unskilled laborers, while demand for farm laborers will drop by twenty percent.

But by 1970, the number of students leaving the nation's public schools each year will increase by one-third over present figures. These potential workers will be absorbed into the labor force, except in the lower reaches where shrinking job opportunities will force more workers into the ranks of unemployed—and unemployable.

What kinds of jobs are available to today's slow learner? The list isn't very impressive: dish washers, domestic help, stock boys, car washers, and messengers. According to one state employment agency, "nothing but the most routine jobs" are open to them.

FOLLOWING ARE some basic questions that an educational executive should ask himself about his provisions for slow learners:

1. Have board members, administrators, and teachers agreed that a problem exists in satisfying the needs of slow-learning students?

2. Have the slow learners on every grade level been identified, on a confidential basis?

3. Have provisions been made in the curriculum to satisfy the needs of these students in terms of societal and individual goals and needs?

4. Has an attempt been made to accept the student, with his varying abilities and needs, and to move him ahead in skill development and subject-matter acquisition?

5. Have the various subject areas been studied to provide material that can be comprehended by the slow learner?

6. Have evaluation techniques been established to ensure that these students are being provided for?

The law of averages puts an equal number of "gifted" and "slow" youngsters in each school. Let us not be guilty of sacrificing one group for the other. ●

Mr. Beggs overviews the slow-learner problem as principal of Lakeview High School, Decatur, Illinois.

SCIENTISTS BUILD TO A HUMAN SCALE

Chemistry, physics, math share a science quad

OF ALL EDUCATIONAL facilities, those for science probably hold the most obstacles for school designers. The problem is to group classrooms, libraries, lecture halls, laboratories, and apparatus storage for the various physical sciences and to bring them into some kind of meaningful, well-ventilated relationship. For colleges and universities the common solution is to enclose everything in a multi-story monolith. Typical are the University of Kansas science building which houses its departments in a single mammoth structure of seven stories with two wings of five and six stories, and the seven-story science slab at Manhattan's Cooper Union.

Had the Korean War not halted plans for a science building at Swarthmore, this Pennsylvania college would also be teaching science in a typically tall, rectangular building. Instead, when planning was resumed, spurred by a $1.8 million grant from the Pierre S. du Pont-endowed Longwood Foundation, a new plan took shape. The joint effort of Swarthmore's science faculty and the architect to measure their plans against a human scale holds an important lesson for educational planners.

Buildings on the Swarthmore campus have never been bound by any one architectural style. Rather, a habit of honest inquiry and forward thinking has governed its plant planning. The completed science building reflects a close communion of science and architecture, for the three departments of chemistry, physics, and mathematics worked long and hard with the architect to achieve the right answers to their space and facility needs.

In 1950, Swarthmore's planning committee was formed to develop a program for the Pierre S. du Pont science building. The committee included a mathematician, chemist, physicist, architect, and project manager. This formula of five equal components turned out to be highly successful. The faculties of each of the three departments drew up five to ten pages of functional specifications which they submitted to the committee. The architect then blocked out a rough idea of what these needs meant in terms of building space.

In an intensive schedule of meetings lasting several months, the committee hammered out conflicting needs among departments (each member reporting back to his department for faculty reactions), considered design and

construction problems, worked with budget limitations, and examined science buildings on other campuses.

The end product, as designed by Philadelphia architect Vincent G. Kling (see Design Competition report, June OVERVIEW), consists of four distinct units organized around a central courtyard. Physics and chemistry each has a two-story rectangular unit, a single-story unit houses the science library, and a two hundred-seat lecture hall completes the quadrangle. Classrooms in the physics wing are used by all three departments.

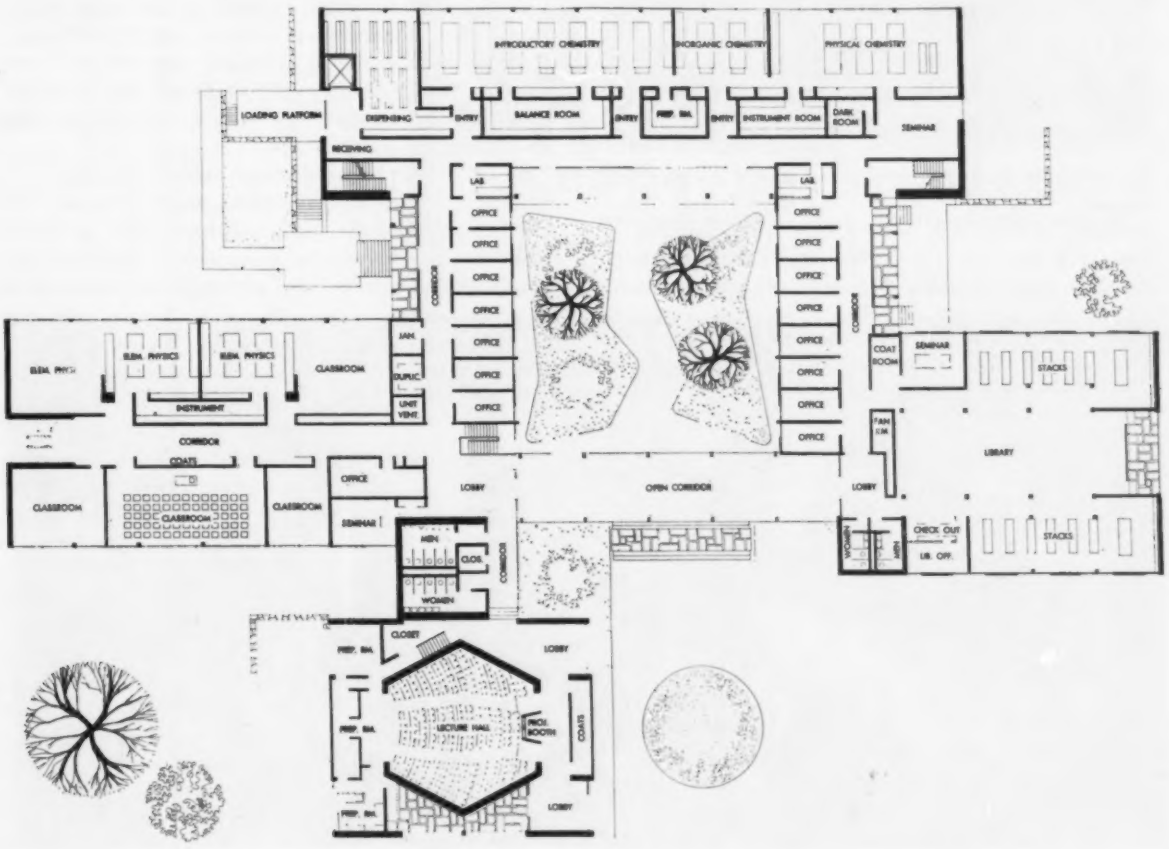
A major problem was to locate the lecture hall and library so that they could be used by other members of the college community, also. They have been given direct access from outdoors for evening and weekend use without opening the entire building and are removed from the activity centers, yet are integrated with the rest of the structure.

Lines of faculty offices link the building wings and afford their occupants a view of the courtyard and rock garden in the heart of the complex.

A structural note: concrete columns and beams are exposed on the exterior and in most interior spaces, concrete wall panels have rugged surfaces of exposed aggregate, and interior partitions are of painted concrete block. Thus the building boldly reveals its structure, "exposing truth" in the tradition of science. ●

Lawrence S. Williams, Inc. photos

Swarthmore's science building is composed of four low units (only chemistry and physics wings have two stories) grouped around landscaped court. Science faculty worked closely with architects in drawing up departmental needs and integrating them in a shared facility. Lecture hall and library can be used evenings and weekends when rest of the plant is closed.



Two areas with high hazard potential are planned for maximum safety in Bethpage (L.I.) High School. Stairways are wide with non-skid treads; open stairwell is eliminated. In workshops "panic" wall switches shut off all equipment when pulled. F. P. Wiedersum Assoc., arch.

Design for Safety

IT IS A reasonable estimate that one-fifth of our student population is in unsafe or "accident-prone" school buildings. Fires alone strike four thousand school buildings each year and leave their toll of injured. But fires aren't the only hazard. Children bump, scrape, and fall their way to thousands of accidents each year.

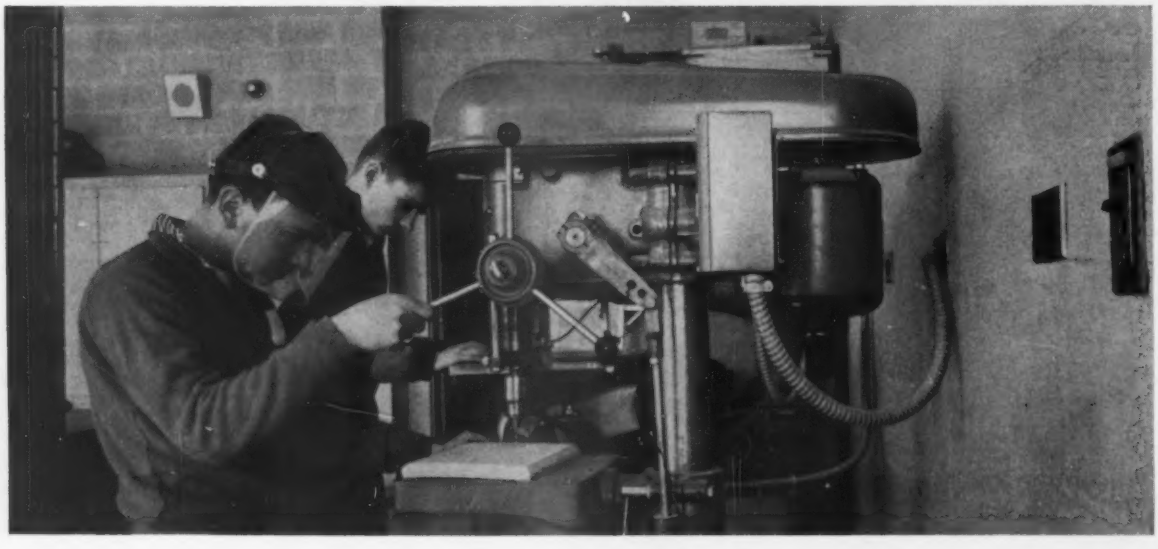
Many of these injuries are caused, directly or indirectly, by danger spots in the building itself.

Maximum safety from fire and other hazards can be achieved, suggests Norman J. Wiedersum, New York architect, only when the designer follows the letter and spirit of state and local codes. And he suggests that additional safety features can be built in that, far from costing more, may save the community money through lower insurance and maintenance costs.

Here are design-for-safety features Wiedersum suggests should be incorporated in every new school:

Corridors: Round all corners in corridors. Recess fountains, lockers, waste receptacles, and other equipment to keep them from projecting into the traffic area. Corridor floors should be sufficiently abrasive to prevent slipping. No dead-end corridors should be permitted. Provide each corridor with outside exits within easy travel from any point.

Doors: Protect hinged doors on toilet stalls with rubber tubes so that children can't pinch fingers between door and frame. Eliminate head rails from toilet partitions (children are known to try chinning themselves on them). Equip interior doors with hardware that makes



it impossible for anyone to be locked in a room. Install flush door saddles under all doors to prevent tripping.

Classrooms: Extend partitions between classrooms above ceiling heights, directly to slabs above, to prevent fire and noise from traveling from one room to another. Attach tackboards directly to solid partitions so there will be no empty space behind them.

Gymnasium: Hang resilient wall padding in gyms, at least behind basketball backstops. Gym and playground equipment should be free of protrusions and sharp corners. Install non-slip tile floors in shower rooms. If play areas are to be surfaced, macadam is preferable.

Kitchen: Provide the kitchen (one of the most fire-prone areas in the school) with independent exhaust systems so that flames cannot spread to other areas. Install non-slip ceramic tile flooring. If an acoustical treatment is considered, use metal acoustical tiles on ceilings and walls. Provide an adequate number of fire extinguishers within easy reach.

Workshops: Install electric lights outside of spray booths so that heat from these lights won't explode atomized paints. Provide a sawdust collecting device for each piece of woodworking equipment.

Incinerator rooms: Incinerator and boiler rooms should be completely fire-proof. Provide two widely separated exits in boiler rooms, one of them opening directly to the outside. Avoid different levels over which custodians must carry equipment to minimize the danger of tripping and the strain of raising objects from floor to floor.

Stairways: Stairway widths should exceed requirements wherever possible to lessen congestion. Maximum riser height should be six and one-half inches or less. Install treads of pre-cast terrazzo with abrasive mixed in to prevent slipping. Provide good lighting over stairways. Design interior stair railings so that children can't climb up and over them.

Building exterior: Windows near grade should not project too far when opened. Eliminate protrusions from exterior walls that might tempt children to climb them. ●

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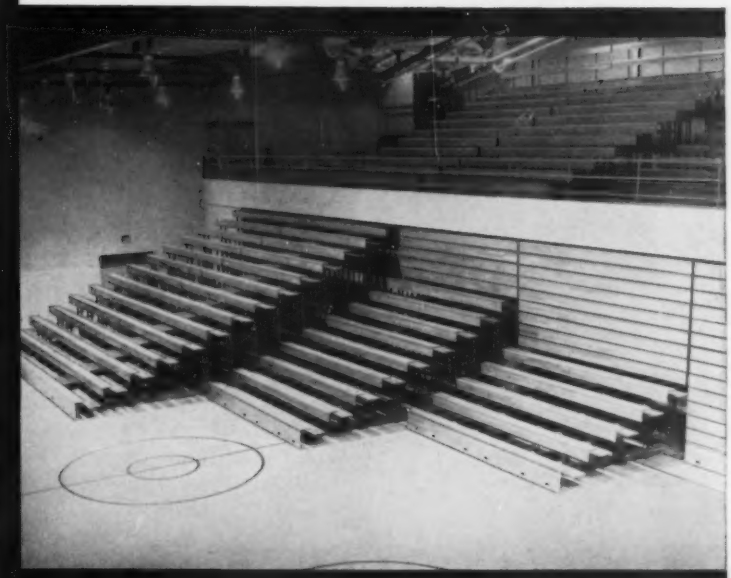

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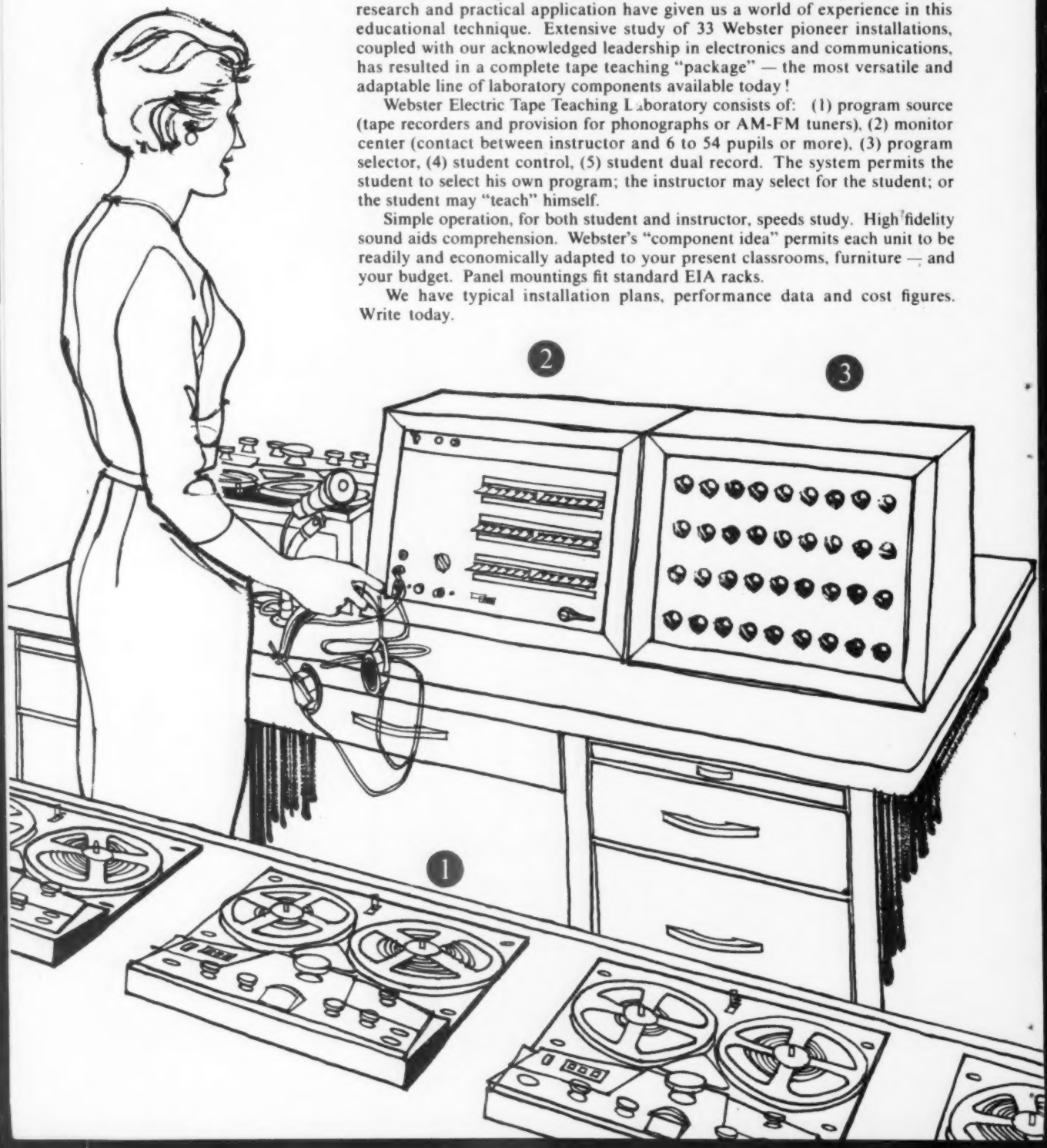

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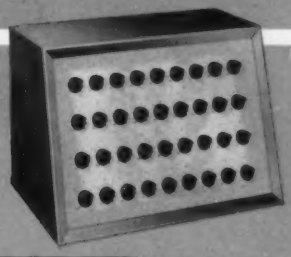
Compact, desk-sized control unit. It provides contact between instructor and 6 to 36 students — add-on units increase capacity to 54 or more stations. The instructor can "listen in" without disturbing the student, or carry on a two-way conversation. Annunciators (optional) permit students to contact the instructor. Pressing a button on the student control lights up the student's selector key on the monitor center and sounds a soft buzzer. All-call and paging features also available. Monitor center is attractively finished in gray with black accents — also in custom colors. Panel design fits standard EIA rack.



3

PROGRAM CENTER

Preferred for most installations — lets instructors direct programs with complete control. Any of nine different programs — tape, radio, phono, audio portions of telecasts — can be circuited directly and selectively to as many as 54 or more students. Desk unit and panel mounting match monitor center in electronic design, size and appearance.

4

NATIONWIDE SERVICE

Wherever you are, there's an authorized Webster Electric service station near by to keep your Tape Teaching Laboratory in peak, efficient condition — to answer service calls without delay. An important point to consider in maintaining an uninterrupted schedule.

ELECTRONICS DIVISION

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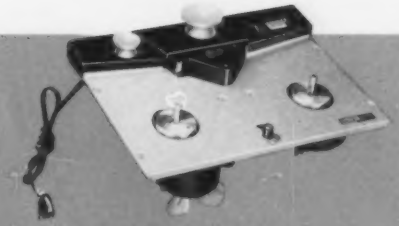
4

STUDENT CONTROL

Transistorized amplifier — exceptionally simple to operate. Only two switches — for speaking volume and listening volume. With a third switch (optional) the student selects program source. This feature is used where the program center is not desired. Accessories include a high impedance, adjustable microphone, and headset.



5

STUDENT DUAL RECORD

This dual-track Ekotape recorder permits the student to record the lesson (from the program source) on one track, his response on the other track. Both lesson and reply can be played back simultaneously to check progress. Speeds learning! With exclusive stop/start action the tape can be stopped and restarted without affecting other control settings. Operation of the recorder is simple — students quickly acquire reflex action with all controls.

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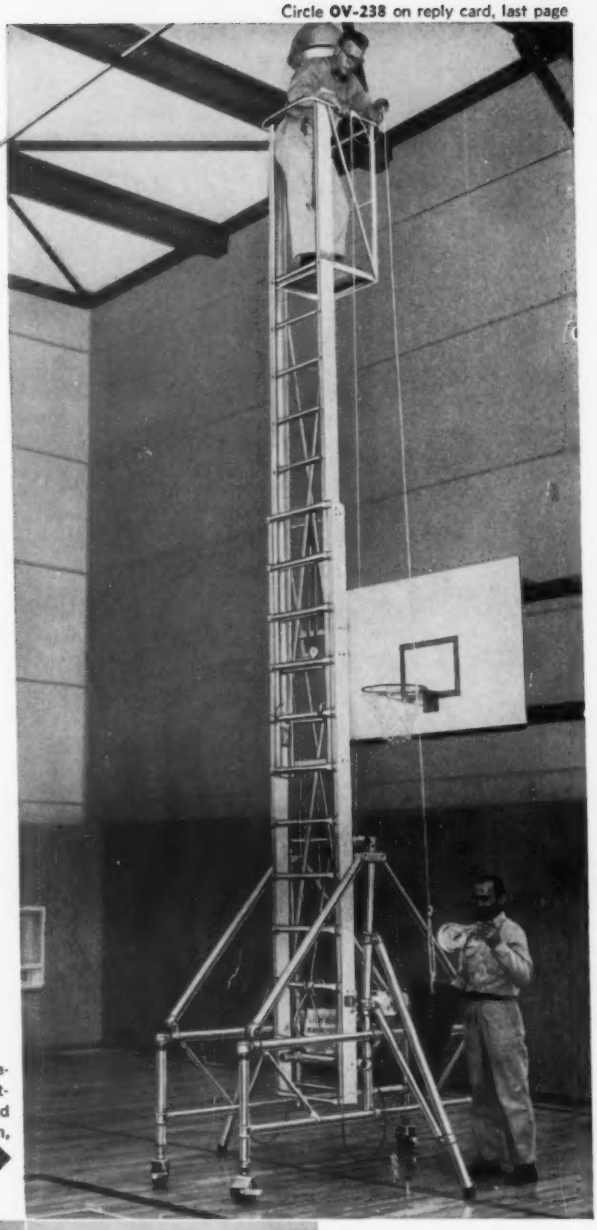
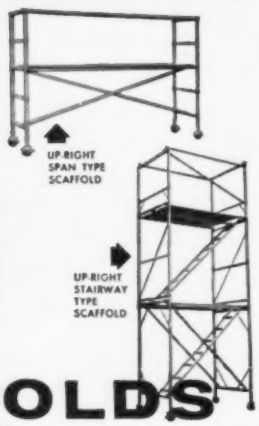


Tallescope speeds up installation and maintenance of overhead lighting, acoustical tile, heating and other facilities at each of 7 junior and senior high schools and colleges in the Stockton, California, Unified School District.

Bridges over auditorium seats. Note one-man operation.

Rolls through doorways. Telescopes and folds down; only 29" wide.

Separates easily into 3 components for convenient storage or transportation.



For TALLESCOPE circular write to

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DEPT. 172, 1013 PARDEE, BERKELEY, CALIF.

In Canada: Up-Right Scaffolds Ltd., 120 Russett Ave., Oshawa, Ontario

The Voice of Business In the Nation's Capital

BUSINESS MUST continue to oppose "further federal encroachment" in the field of education, while supporting education at every level in the states and school districts. This is the official position of the Chamber of Commerce of the United States.

Opposition to federal support has been strongly reemphasized by the Chamber's President, Arthur H. Motley of *Parade* Magazine, both before Congress and at the two party conventions. Business support of education is pushed, according to the Chamber, in bulletins to individual members, to local Chambers of Commerce and to other affiliated groups, in which the individual businessman is prodded to take an active part in local affairs such as parent-teacher groups, boards, and citizens committees.

President Motley points out that business supports education (at other than the federal level) both for the national good and for a more directly selfish end: that business may have a steady supply of educated employees and an enlightened community in which to prosper.

Here's the business position, as represented by the U. S. Chamber:

1. The nation's public school system is traditionally and distinctively a community affair, and states and local school districts must accept full responsibility for financing and operating public schools.

2. Federal financing leads to federal control, and federal interference is most often misguided, places massive emphasis on the wrong things, is too ponderous to change with needs.

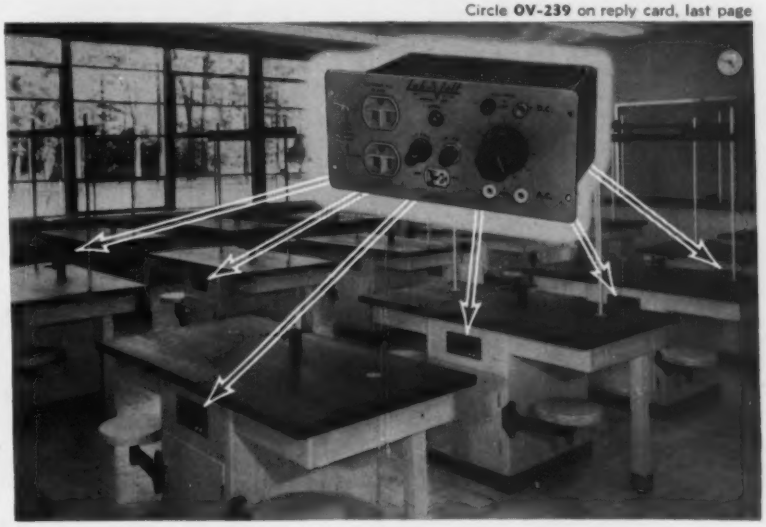
3. Payment of taxes by business organizations isn't enough. Businessmen must also contribute time and interest, money, facilities and equipment, and provide both job opportunities and guidance.

Before the two parties' platform committees Motley reported that businessmen, besides paying their taxes and making contributions directly to educational institutions, believe they must also:

Provide consultant services on constructional and operational methods, when asked by local school systems; contribute equipment and facilities; offer summer employment opportunities both to teachers and students; cooperate in vocational guidance and training; establish scholarships for talented high school students who need financial help; and join in business-education conferences at the community level to find other proper

By E. E. Halmos, Jr., who reports on the Washington scene for OVERVIEW. The magazine does not share the opinions expressed by the U.S. Chamber, nor does it believe them to be fully representative of business generally (See "The Corporate Citizen," page 47), but presents them because they are important for an understanding of the national scene.

Circle OV-239 on reply card, last page



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and appropriate contributions.

He added that these obligations are in addition to the in-plant and on-the-job training which is today an important provision within most corporations.

"Increased economic and cultural well-being will accompany a continuing rise in the educational levels of our people," he said. Further, he points out, "Business requires educated leadership for its own advancement, and depends in great measure upon the schools and colleges of the nation to supply such leadership. . . . In the public interest and in its own interest, business has a responsibility to help higher education continually replenish the nation's supply of educated men and women."

Key tenet of the Chamber is that public education cannot properly be controlled from the federal level—that it must remain a local operation.

Past federal interventions in education have been the result of war psychoses, says Motley. "The Morrill Acts were approved during the Civil War, the Vocational Acts during World War II, and the National Defense Education Act in the sputnik hysteria." This last he called a decision about the emphases and priorities of the subject matter in the common schools, imposed by congress on state and local authorities. "Programs under this act are scheduled to terminate in 1962—and should be allowed to do so."

President Motley stands by the point set out in the Chamber's 1960 "Policy Declaration": "Individual and community responsibility . . . are equally essential to the preservation of academic freedom and to the maintenance of education of the highest quality. All measures that government may take to meet either temporary or long-range needs in public or higher education should be directed toward the stimulation of such individual and community responsibility . . . measures of government to support education should be subjected to full-scale public debate before adoption, to determine that they are prudent, reasonable, and appropriate." ●

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MUST PUPILS BE TAUGHT TO SEE?

Yes...in the sense that they must learn about the various factors involved in the proper use of light and sight.

Because the relationship of light and sight is not an established part of the school curriculum, teachers pursuing the subject rely heavily on Better Light Better Sight Bureau supplementary teaching aids. These aids – sponsored by industry and developed after consultation with representatives of the National Education Association–have proved particularly valuable in the study of light and sight. Educators indicate that such classroom aids do much to facilitate student understanding, ease teaching work, and heighten interest in a most fascinating subject. What's more, the aids are better able to present *timely,* intriguing material not normally found in standard textbooks which cannot keep up-to-date with fast-paced developments in this specialized field.

PREPARES TEACHING AIDS

Last year, the Better Light Better Sight Bureau distributed about 40 tons of supplementary classroom aids to more than 8,000 teachers throughout the country. The Bureau is a national, non-profit organization founded in 1934 under the sponsorship of the electric industry to foster, through educational means, a better public understanding of light as an important contributing factor to sight in homes, schools, offices and industry.

The Better Light Better Sight Bureau serves America's educational systems by offering to educators a variety of classroom materials including posters, leaflets, quiz sheets, films and guide books to assist in teaching "the facts of light."

FOUR SPECIFIC PROGRAMS

The Bureau's material is divided into four different programs for four different school areas: (1) Elementary (4th, 5th and 6th grades); (2) General Science and Health classes; (3) Home Economics classes; and (4) Industrial Arts classes.

If you are an administrator interested in learning more about the supplementary classroom programs now being made available to teachers by the Bureau, please write:

BETTER LIGHT BETTER SIGHT BUREAU

DEPT. OV-2, P.O. BOX 1647, GRAND CENTRAL STA., NEW YORK 17, N. Y.

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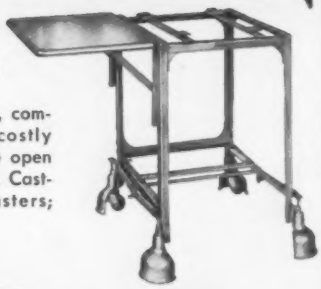

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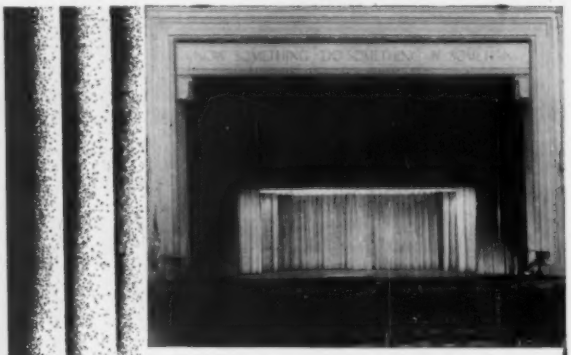

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Academy for New York's Finest

THE ERA OF the strong-arm, club-swinging policeman is coming to an end. Replacing the dated stereotype is the modern law-enforcement officer—able to use force when necessary, but relying as much on his knowledge of human relations.

Symbol of the transformation is New York City's new Police Academy. The $7.8 million, nine-story structure, scheduled for completion in 1962, will replace ancient, cramped quarters in an abandoned school building.

The new Academy will turn out qualified policemen, thoroughly familiar with the law and its enforcement, but also well-grounded in human behavior and the humanities. Stressing this point, City Police Commissioner Stephen P. Kennedy said that a police academy should not be a vocational training school.

"The professional training of policemen has been underestimated and neglected in most police departments," added Kennedy. "In too many cases the emphasis has been on political palatability of police operations rather than on a truly scientific effort to solve police problems."

He predicted that eventually all new policemen will be required to be college graduates. (Of the 23,923 persons now on New York's police force, only 1,230 have degrees.)

The new Academy will be one of the most modern of its kind, says Robert Gallati, Police Academy commandant. It will process about twelve hundred recruits a year through four-month academic courses and provide refresher courses for all members of the force.

Thirty-two classrooms will be in use almost constantly, Gallati said. In addition, a library, museum, lecture hall, firing range, and swimming pool will be available to students. The building will include facilities for two police precincts, a fully-equipped police emergency squad, and a police laboratory.

The new Academy will allow the city to effect a concept of training that started with Mayor Robert Wagner's administration, explained Commissioner Kennedy.

Eleven hours of training are now devoted to human relations. The curriculum will add race relations, psychology, human and community relations, government, and police science. Additional training will be compacted into the present schedule.

Training will involve four months in the classroom and two months in the field working with a regular patrolman.

Training of recruits is only part of

Louis Checkman

New York's new Police Academy, located on Manhattan's East Side, will train 1,200 recruits a year. The $7.8 million building will have $400,000 worth of equipment; design is by Kelly & Gruzen, Architects.

Circle Ov-247 on reply card, last page

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GAME-TIME
climbers . . . . . .

Featuring . . . Sectional construction, unitized sections • Rustproof galvanized steel pipe inside and out, aluminum finish • Instant telescoping connectors and set screw assembly • Great range of exciting "play themes," activities, and sizes.

MOUNTAIN CLIMBER

Offering sectional combinations from single section 30" high, to complete climber, 9'-5" high—climber can be "tailored" to different age groups. Designed so handholds are always within reach, no open space is large enough for "fall-throughs," safety comes first throughout. Four models: bottom section; bottom and top; top and middle; all three sections complete.

CATWALK CLIMBER

Combined overhead ladder, stall bars, and vertical climber, plus wide hand-over-hand "racing" alley. Climber consists of three unitized sections—available singly or in combinations of three and four. Two or more complete climbers can be used together forming "H" or "X" shapes or other interesting arrangements.

SPLIT LEVEL CLIMBER

Arched climber with two unitized sections. Height of lower arch is 5', of upper arch is 6'4". Is only furnished complete.

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Academy (continued)

what goes on at the Police Academy. All men on the force are required to take three days of refresher training each year. This ranges from public relations and public speaking to mouth-to-mouth methods of artificial respiration, foreign language, and changes in law.

Carrying out this stress on the educated policeman, the department conducts a police science program with the Bernard M. Baruch School of Public and Business Administration at the College of the City of New York.

The four-year program permits members of the force to earn a bachelor of business administration or a master of public administration degree, combining work and study. Presently, about eleven hundred men are enrolled in the undergraduate program and another one hundred in the master's program. Police Academy work counts for ten credits toward a degree at City College.

About one hundred fifty scholarships are granted to policemen each year to induce them to continue their studies. Arrangements with most local colleges enable men to earn advanced degrees in public administration while continuing their regular work.

In a separate attempt to attract qualified young men, the police department has adopted a Police Cadet Training Program. More than two hundred high school graduates will be selected annually for the program, which will enable them to attend college in the metropolitan area and perform non-enforcement duties with the police force. Cadets will also take courses at the Academy.

Cadets must have the same qualifications as regular policemen and will be permitted to major in any area related to police work. They will work a twenty-hour week with the force doing clerical work, thereby freeing patrolmen for regular assignments. Pay will be $1.60 an hour.

After graduation they will be required to pass the police exam. Officials believe the program will create a pool of qualified men to fill vacancies on the force. •

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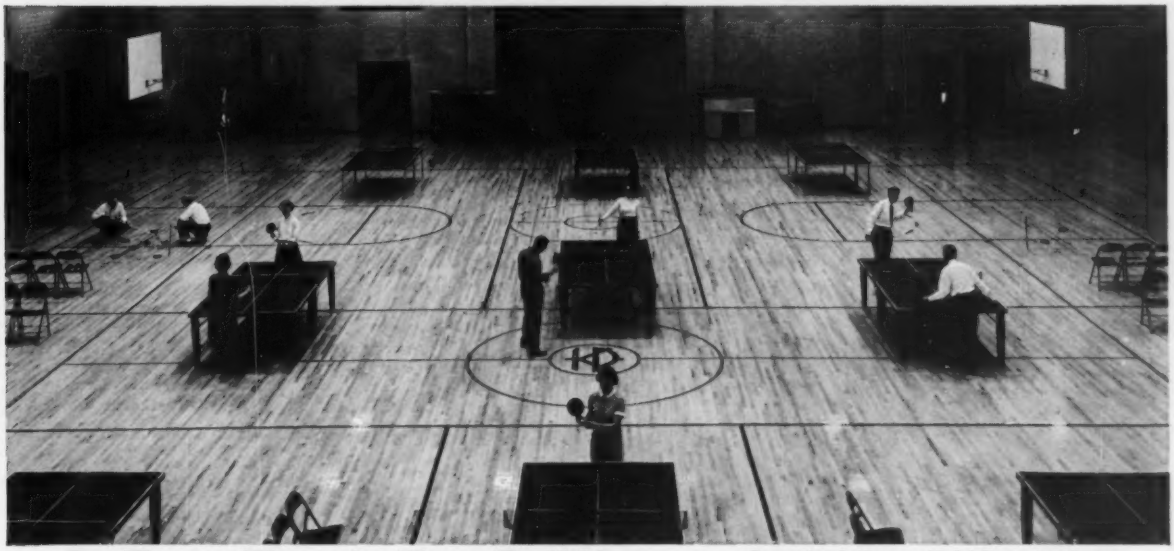

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COMMUNICATIONS CLINIC

Heritage Handbook

THIRTY MILLION Americans changing addresses every year . . . small communities swallowed up by metropolitan complexes . . . cities struggling to retain their individuality. The problem of retaining civic unity has stimulated interest in school study materials aimed at teaching youngsters about their heritage.

In Akron this need became recognized a number of years ago. The Rubber Capital had long since stretched beyond the industrial-city stereotype. There were institutions, traditions and a new economy that needed explaining to young generations, and a usable textbook seemed to be the tool most needed by teachers. The problem became the joint concern of a group of community leaders and educators, and the outcome was *The Akron Story,* a 320-page supplemental reader for the fourth grade.

Already it has been reprinted in serial form by a metropolitan newspaper and dramatized on television, and it has been read enthusiastically by more than eight thousand children in its first year of use.

The plan for producing a local history written for school use grew out of conferences between school people and the Akron Chamber of Commerce. The ideas jelled in the signing of an agreement between the Chamber and the Board of Education; the Chamber granted $12,000 for preparation of a manuscript and the school system directed its preparation and financed the printing.

A skilled writer and teacher of English was commissioned to prepare the text. She did original research, transformed it into an interesting narrative, and adapted it to the fourth-grade level. Teachers helped by sampling chapters with their pupils and pointing up passages that needed clarification. A Chicago firm edited the manuscript and designed the book.

In virtually every school in Akron one can now find exhibits and projects which have grown out of children's interest in the book's narrative, which tells of the adventures of the Jordan twins, David and Diana, when they move to Akron and begin finding out about their newly adopted community.

Although cooperative work on a publication of this kind tends to unite the community, it is a mistake to regard it as a public relations device. These locally-produced curriculum materials must be carefully researched, cleverly written and attractively produced. ●

By Martin Essex, who figures in "The Akron (Ohio) Story" as its superintendent of schools.

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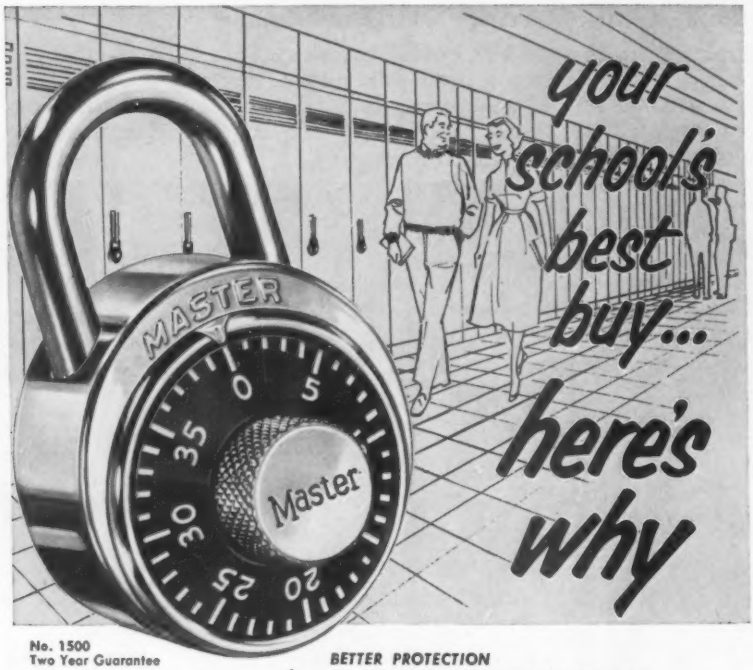

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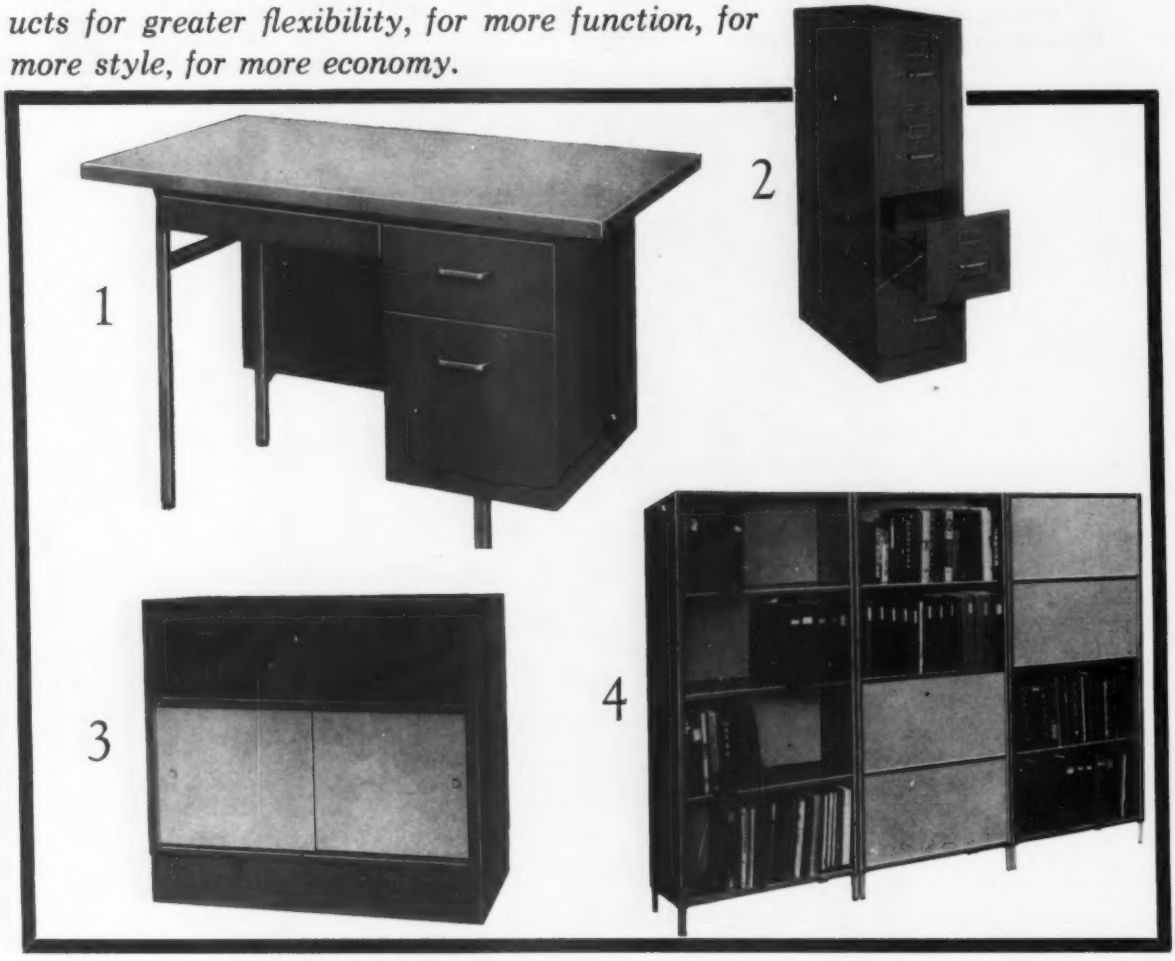

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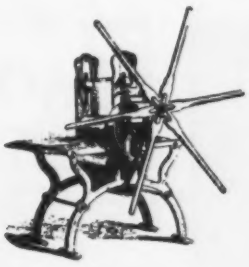

BUSINESS RESPONSIBILITY IN ACTION

Edited by Dan H. Fenn, Jr. New York: McGraw-Hill Book Co., Inc. $4.95.

An unusually readable discussion of business responsibility in its community, in politics, in world affairs and in its own family, this book is not for anyone looking for the easy answer. It does contribute to a better understanding of the complexity of these problems in a world where the corporation-citizen has great obligations and opportunities for the promotion of a free society.

Adlai Stevenson's eloquent challenge to businessmen "to think greatly" comprises the final chapter, and appropriately climaxes a book which is directed to managers. But reading it will give all of us a more sympathetic understanding of the difficulties and conflicts that make it so hard for responsible businessmen to act appropriately as trustees for stockholders, as employers, and as competitors for the consumer dollar, while fulfilling their role as corporate citizens.

INTELLIGENCE AND DEMOCRATIC ACTION

By Frank H. Knight. Cambridge, Mass.: Harvard University Press. $3.75.

Mr. Knight is a distinguished professor emeritus of social science and philosophy at the University of Chicago; this book rests on a series of lectures given at the University of Virginia; and it is under the distinguished imprint of Harvard's University Press. Yet this reader kept being reminded that intelligence is a term used by some to mean about what common sense means to the mass—a kind of mental picture of the speaker's own which he automatically and arrogantly assumes to be that of *any* intelligent person (of whom he can concede there are lamentably few others!)

The views of Mr. Knight are in fact highly intelligent in the sense that they spring from a highly developed mind with long years of observation of our society. The issues he raises are central. Whether they are the right questions can only be surmised at this juncture. At least they are right for those who believe that critical intelligence, intelligent (that word again) judgment, government by discussion, and rationally imposed self-constraint are the ultimate and sole bases for action and decision. Convictions, values, even prejudices are to hold no place in Mr. Knight's democratic action.

Not a highly hopeful, but a fairly representative set of views.

PLANNING YOUR SCHOOL BUILDING DOLLAR

By Carl H. Stautz. Philadelphia: Chilton Company. $2.75.

Getting a good architect, a good school, and a good budget are all made to seem easy in this very practical book. Even the problem of getting bid prices within the budget (which is usually set months or years before bids are actually taken) are pretty well solved. Altogether this is a set of calm and fair prescriptions which if followed will nearly guarantee a workmanlike job and a fair degree of cost control.

Two headaches in school construction are getting costs in line with budget (or vice versa) and getting a school which will meet the needs of the day it opens and be adaptable to changing needs of the days thereafter. If cost estimating were as exact a science as Mr. Stautz represents, life would be simpler, and the only difference among the bids would be the amount of profit each contractor thought right. It's not that easy. Two fine contractors will figure quite different costs for erecting the same steel or brick or whatever for the same job at the same time. The architect who happens to have guessed the right sub-figure for the winning contractor's every sub-calculation has never lived—at least not in a world of open competitive bidding.

Similarly the creation of an effective educational building for a given site, a given program, a given community, and an uncertain future just does not follow from formulae (nor from stock plans). Imagine how horrible the poorer run-of-the-mill schools might have been had it not been for the few creative architects who expressed new ideas, and found new, not perfect but improved, solutions!

This book will not raise our sights, nor move us to greater buildings, but it is still worth having and reading as one of several books on the subject.

ADMINISTRATIVE RELATIONSHIPS

By Jack A. Culbertson, Paul B. Jacobson, and Theodore L. Reller. Englewood Cliffs, N. J.: Prentice-Hall, Inc. 1960. 517 pp. $6.75.

Preparation programs in educational administration have been hampered by a dearth of suitable cases and insufficient literature on the use of the case method. *Administrative Relationships* helps to satisfy both needs.

Part I deals with case analysis, the preparation of cases, and case-method teaching. Part II contains sixteen cases, well distributed to rep-

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resent various sizes of school districts and units of administration. In Part III, the authors discuss concepts, in chapters dealing with administrative processes, communication, morale, change, and decision-making.

Although the reader's impression is favorable, certain weaknesses are discernible. First, a less-than-perfect job of editing has resulted in errors. Secondly, many readers prefer to use cases that emphasize reporting and hold editorializing to a minimum; this is not true of every case in *Administrative Relationships.* In some instances, the reader feels the case writer's bias. Thirdly, those who have been waiting for cases dealing largely with instructional problems will be disappointed.

But there is much to praise in this book. The authorship is such as to inspire confidence in the soundness of its contents, and that confidence is not betrayed. The writing is not encumbered by educational jargon. The analysis of one case ("The Valley City Consolidation Issue") by representatives of four disciplines—educational administration, political science, psychology, and sociology—is an excellent device, as is that of two divergent views of participants in the same case ("A Coin Has Two Sides").

Administrative Relationships is definitely recommended for school administrators' professional libraries and for use in preparation programs.

KENNETH E. MCINTYRE, Professor, College of Education, University of Texas

PLANS AND THE STRUCTURE OF BEHAVIOR

By George A. Miller, Eugene Galanter, and Karl H. Pribram. New York: Henry Holt and Co. 1960. $5.

Not only do the science fiction buffs now see something almost human in mechanical computers and communications systems. Here three young men, who spent a year together at the Center for Advanced Studies in the Behavioral Sciences, build a new and different explanation of human behavior (Plan and

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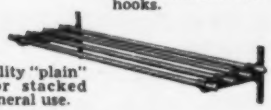

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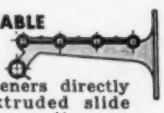

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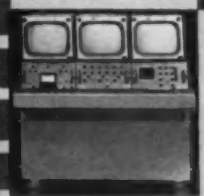

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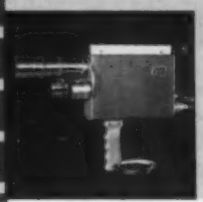

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Note: OVERVIEW does not customarily review books written for pupils, but the two series reported below are of exceptional interest. Designed for supplementary reading and stimulation of students' interest, our own readers will find them fun to read, and useful to pass on to bright young friends who will probably find some of them less difficult than we have ourselves!

Exploring Mathematics on Your Own—Modern Mathematics Series

Webster Publishing Co., 1154 Reco St., St. Louis 22, Mo.

Twelve paperbacks of not more than fifty pages each cover as many aspects of mathematics. Designed most attractively and the content skillfully selected to engage the fascinated interest of students who want to go beyond the textbook, these are mathematically and educationally sound as well. Seven titles are available now with five due this fall. Those now available include:

Sets, Sentences and Operations, 85¢. *The Pythagorean Theorem*, 75¢. *Topology—The Rubber-Sheet Geometry*, 80¢. *Understanding Numeration Systems*, 80¢. *Fun with Mathematics*, 75¢. *Number Patterns*, 75¢. *Invitation to Mathematics*, 85¢.

The Science Study Series

Anchor Books, Doubleday & Co. Garden City, N.Y. Available through Wesleyan University Press, Inc., Columbus 16, Ohio. 95¢ each.

This series is prepared under the direction of the Physical Science Study Committee of Educational Services, Inc. It presents distinguished scientist-authors who write authoritatively but clearly and appealingly on their specialties for students and the general public. Dr. Alfred Romer writes on *The Restless Atom,* Dr. Arthur H. Benade of Case Institute of Technology does a lively book on *Horns, Strings & Harmony —The Science of Enjoyable Sounds.*

"The primary purpose of these books," the publishers state, "is to provide a survey of physics within the grasp of the young student or the layman."

PAPERBACKS

Facts You Should Know About Home Study Schools

Better Business Bureau of Metropolitan Boston, Inc. 1959. 16 pp. 15¢. Copies available from the National Home Study Council, 1420 New York Ave., NW, Washington, D. C.

Conflicting Ideas in Teacher Education —Bode Memorial Lectures

By N. V. Scarfe. College of Education, Ohio State University, Columbus. 1959. 44 pp. $1.

Social Studies for the Academically Talented Student

National Education Assn., 1201 Sixteenth St., NW, Washington, D. C. 1960. $1.

Characteristics of Administrative Handbooks for School Staff Personnel

By John F. Staehle. U. S. Department of HEW, Office of Education. Available from Supt. of Documents, U. S. Government Printing Office, Washington, D. C. 1960. 54 pp. 25¢.

Effectiveness in Teaching—New Dimensions in Higher Education

By Winslow R. Hatch and Ann Bennet, U. S. Department of HEW, Office of Education. Available from Supt. of Documents, U. S. Government Printing Office, Washington, D. C. 1960. 32 pp. 20¢.

Building Exits Code—NFPA No. 101

National Fire Protection Assn., 60 Batterymarch St., Boston Mass. 1960. 256 pp. $1.50. •

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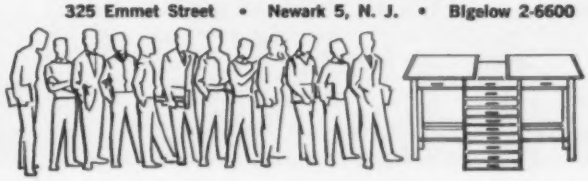


Portable Classrooms

Schools go to the children in Southern California. Population shifts within this most migrated-to state in the nation have imposed fluctuating demands on elementary school facilities. To keep up with the mobility of the pupils in their districts, school administrators are turning to portable classroom units.

In San Bernardino, for example, administrators noted that elementary school populations in new subdivisions were increasing in proportion to general population growth but decreasing in older parts of town. A guard against the likelihood of future shifts called for schools that could be moved to follow concentrations of youngsters.

After experimenting with various types of portable construction, San Bernardino's staff architect, C. K. Allen, chose all-steel units as the basic component. "Steel goes up fast, has excellent maintenance characteristics, and lends itself to the problem of portability," Allen said.

This year San Bernardino will put up eleven portable steel classrooms, at an average cost of $12 per square foot. The first of these units was built in 1956.

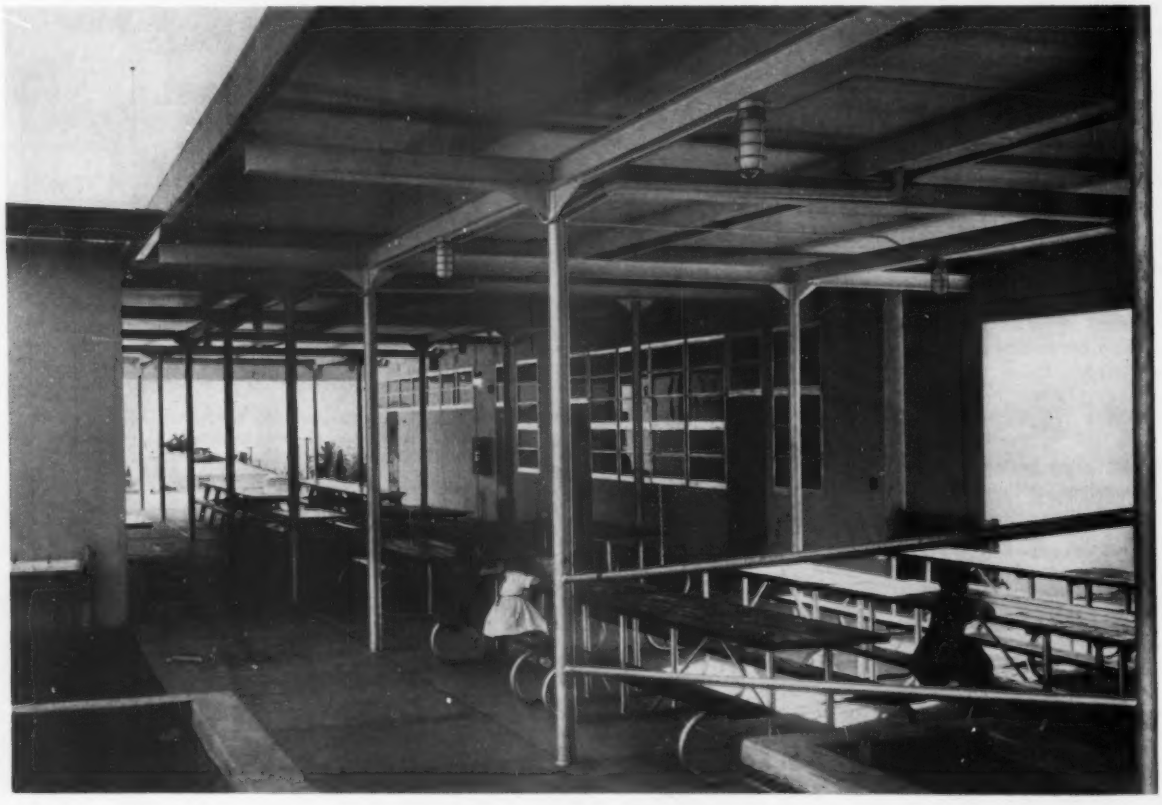
San Bernardino's new Sterling School is an example of portable construction (its outdoor eating shelter is shown below). The basic unit is 32 feet by 28 feet. It has a frame of four 3-inch square steel tube columns supporting two 10-inch beams on 16-foot centers. Column-beam connections are bolted with ½-inch diameter machine bolts. Three purlins span the 16 feet between beams and cantilever 8 feet on both sides, forming the length of the unit. Curtain walls are made of gypsum board and fiberglass insulation sandwiched between interlocking sheets of galvanized steel. Roof deck is of steel ribbed construction. Roof and wall panels bolt together; wall panels are plug-welded in three places, top and bottom, to the steel frame.

Columns are welded to base plates which bolt to the concrete slab floor. With the columns unbolted, the buildings are ready to be lifted off the slab and placed on the mover's dollies.

For easy relocation of the units, utilities are brought in through walls instead of floors. Sewer and water lines have connections at exterior walls. Gas and electricity lines come in just below the roof line and are self-contained in each unit. Connections and splice boxes are located at each end so units can be butted together to form a long classroom wing.

Unobtrusive in appearance, the portable classrooms blend well with almost any architectural scheme.

Cas Sermak



Jay

Schools of Theology

Mercer Memorial School of Theology in Garden City, Long Island, is an unusual kind of night school: it provides evening and Saturday training for older men who hold full-time jobs but wish to enter the Episcopal ministry. Designed by Slater and Chait of New York, the school (pictured above) establishes a religious atmosphere within a contemporary setting.

Distinctive features: arches form cloistered enclosures at the entrance, a spire of transparent amber glass throws a shaft of warm light upon the altar in the sanctuary below, prisms of glass set in the base of the spire form a crystal prismatic eye with a many-pointed star, and decorative concrete fins with cutout crosses mark off the classroom area.

Colored glass admits soft light into the classrooms and in the gallery which connects to the chapel. Plastic skylights augment natural lighting and create an interplay of translucent and colored light in the classrooms. Dramatic visual effect is also created in the gallery: colored light through walls of cathedral glass play on textured walls of the cloisters opposite to form a "moving cross" effect. Floors are warmed by radiant heating—a thoughful consideration for the knees of kneeling students.

Although only sixty-five students are now enrolled, the school is sized and piped for considerable expansion; officials found a "tremendous response" to the idea of an evening school for men who respond to late calls to the ministry.

Academic unit shown below is the start of a $5 million master plan for the Southern California School of Theology in Claremont. It consists of three superimposed concrete slabs, the lowest level for parking, the upper levels for classrooms and offices. The slabs are penetrated by copings which create patios onto which classrooms open. The terrain will be shaped into a series of terraces, the highest of which will be the site of a chapel. Charles Luckman Associates, Los Angeles, with Criley and McDowell, Claremont, are the designers. ●

Julius Shulman

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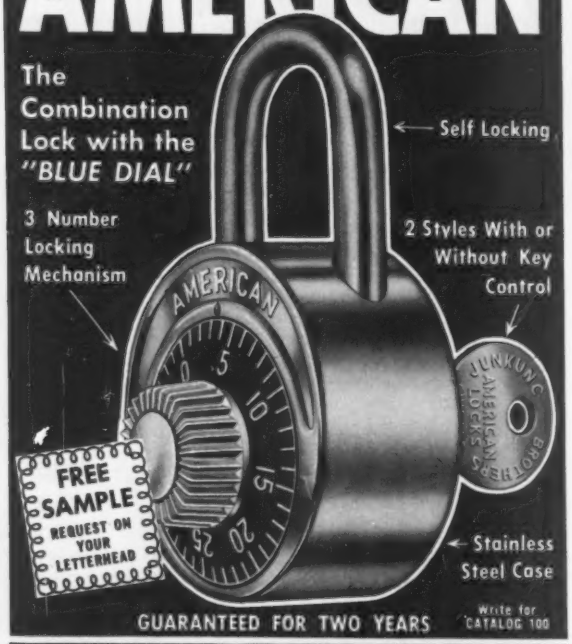

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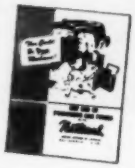

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NEWS ROUND-UP

SEPTEMBER 1960 OVERVIEW VOL. 1, NO. 9

Competition Rewards Architectural Revolution

Mastic Tile Division of Ruberoid has just awarded $25,000 in prizes in its second annual design competition to upgrade school plant utilization. Theme of this year's competition was "Education for Youth and Adult—Recreation for All the Family."

First prize went to Alfred J. Petrilli, of Minoru Yamasaki & Associates, Detroit, and Edward Colbert, now with Ragland Watkins, Architect, McComb, Miss.

The jury, headed by Henry L. Kamphoefner, dean of the school of design at North Carolina State College, cited the winning entry for its total plan; the school plant centered around an information center which also served the community. Jury was most impressed by the "awareness of the tremendous revolution taking place in American education."

Emphasis of the winning designs is on community use of educational facilities, points out Seymour Milstein, Ruberoid vice president. "They also show a recognition by the architectural profession of the urgent problem of every community to find ways of making maximum use of these facilities for the education and recreation of the entire community."

Cooperative Ph. D.

American universities have been advised to work together, "to pool their resources," in the face of rising costs and enrollments. The recommendation was disclosed by the University of California as part of a five-year study by ten universities under a grant from the Fund for the Advancement of Education.

In just such an effort to avoid duplication of costly laboratories and other advanced-study facilities, Ohio's State University and Miami University plan to award Ph.D. degrees cooperatively.

The plan was adopted to "maintain and advance the quality of graduate study for the doctorate in Ohio" and to avoid at both institutions "the duplication of specialized facilities and other extraordinary expense entailed in providing advanced-degree work."

Jury considers entry in Mastic Tile's 1960 architect's competition. Standing, left to right, A. Gordon Lorimer, Henry L. Kamphoefner, Dr. Harry A. Carman, John Lyon Reid; seated, Eberle M. Smith, W. W. Caudill.

One Bible— Or None?

Protestant, Catholic, and Jewish leaders should agree upon a mutually acceptable version of the Bible to use in public schools. This suggestion comes from the National Council of Churches committee on religion and public education.

At the group's annual meeting, Rev. Walter Abbott, S.J., editor of religion and humanities for the Jesuit weekly, *America,* said he eventually sees "a common translation of the Bible acceptable to all faiths." Predicting that this would take twenty-five years, he urged authorities of all faiths meanwhile to approve acceptable passages for use in the public schools.

Father Abbott reported that it has already been proposed that Roman Catholics adopt the Revised Standard Version, now used by many Protestant congregations.

However, opposition has been expressed to the reading of any Bible for devotional purposes in the public schools. The protest, from the Central Conference of American Rabbis, charged that the practice "clearly constitutes an introduction of religion into state-supported educational institutions."

The rabbis, representing some million Reform Jews, asserted, "The reading of any particular Bible translation, even if recited without comment, introduces sectarian interpretation and would violate the religious conscience of some of the children."

In Florida, hearings will be resumed in a suit aimed at banning Bible reading and other religious observances in the state's public schools. Tempers flared in the proceedings, initiated by Dade County parents—three Jewish, one Unitarian, and an agnostic—who contend these practices are offensive to their beliefs

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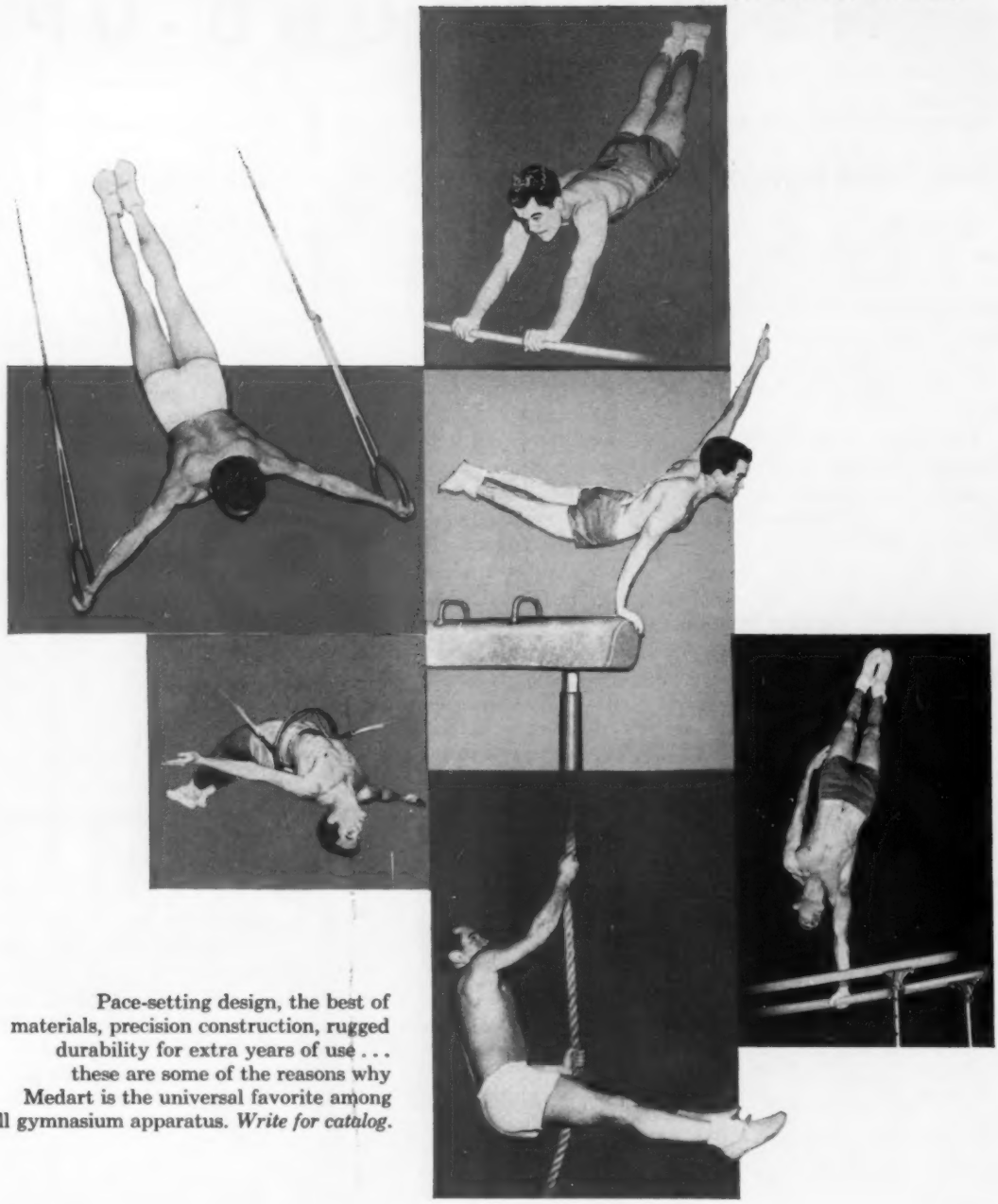

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and violate their children's religious liberty.

Specifically objected to in the suit were recitation of the Lord's Prayer, reading of the King James version of the Bible, and nativity and resurrection pageants.

Regardless of the outcome in the lower courts, the case will likely end up in the U. S. Supreme Court to test the constitutionality of religious observations in the nation's public schools.

Classes Too Big

Although relief from overcrowding and elimination of half-day sessions is high on the list of goals for the schools, little or no progress on that score has been achieved in many districts, according to NEA booklet, *Class Size in Urban Elementary Schools—1959–60.*

Of thirteen million children in urban elementary schools, eleven million are in classes of more than twenty-five, generally considered maximum for an elementary class. Six and a half million are in classes of more than thirty; over two million are in classes of upwards of thirty-five.

The median class size is 30.2 and the average, 29.5. As the population of the district increases, the booklet reports, class size tends to consistently increase, despite half-day sessions to relieve overcrowding.

Benefactors

The nation's philanthropic foundations have grown from fewer than 600 two decades ago to 5,202 in 1960, according to "The Foundation Directory, Edition 1," published by the Russell Sage Foundation. They have assets totaling $11.5 billion and annually grant $625 million.

Education receives the largest share — over $257 million — with health, social welfare, and scientific research coming in for other major grants.

The 872-page book is the most comprehensive one on foundations ever prepared. Co-editor Frank Emerson Andrews, an expert on foundation history, said he has additional information on 7,000 foundations too small for inclusion in the directory.

More than 87 percent of the foundations listed were established since 1940.

One hundred twenty-nine of the largest foundations have combined assets of $8.8 billion—or 77 percent of the total. The five largest are Ford ($3.3 billion), Rockefeller ($648 million), Duke ($414 million), John A. Hartford ($414 million), and Carnegie ($261 million).

Avid Readers

"Young people are reading more and better books than ever before," concluded two New York City high school teachers after they surveyed the country's public school and university libraries.

Young students account for an increasing share of total circulation in the nation's libraries, reported the researchers, Dr. Joseph Mersand, chairman of the English department at Jamaica High School in Queens, and Joseph B. Maggio, English

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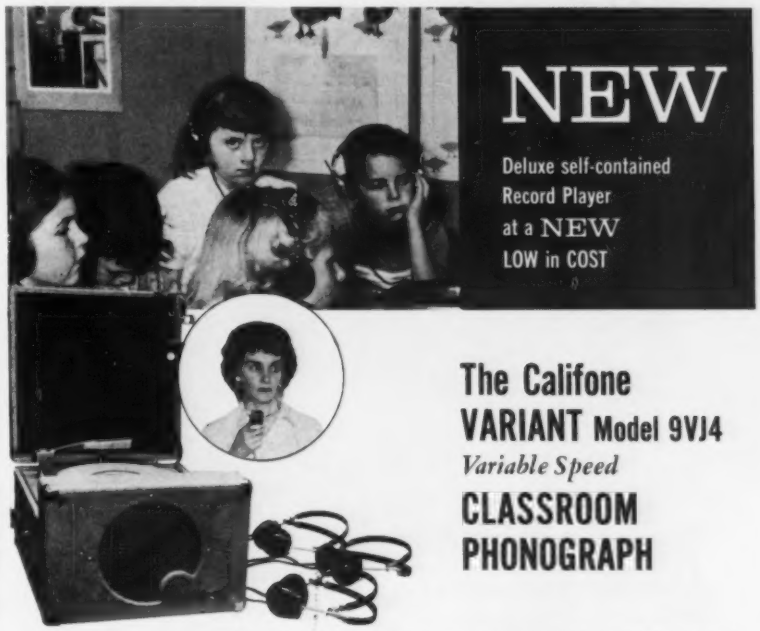

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teacher at Walton High School in the Bronx. They also found that nonfiction books—science, history, biography—are gaining popularity; in some cases, even surpassing fiction.

In an interview with the *New York Herald Tribune,* Miss Margaret C. Scoggin, coordinator of Young Adult Services for the New York Public Library, estimated that one-quarter to one-half of the library's total circulation last year was checked out by teen-agers.

She named these reasons for the increase in young people's reading:

- Pressure to get into college is making more young people aware of the value of reading the classics.
- Classics are more attractively packaged and are easy to obtain in paperback versions.
- Television has created a demand for books by popularizing many of the classics.

Picking up the challenge, the U. S. Junior Chamber of Commerce last month inaugurated a Good Reading Program for Youth to bring good books to the attention of children and their parents and to make quality reading material more readily accessible.

The project will be offered to 3,800 communities which have Jaycee chapters.

Resources Unlimited

For the past two years, seventy-five artists and scientists have been conducting voluntary Saturday morning classes in everything from reading to electronics for interested students, in grades 5 on up, in Rockland County, N. Y.

This year, the independent intellectual resources pool will become a regular part of the school program. With the aid of a grant from the New World Foundation, selected students in the district will attend weekly seminars with members of the resources pool. In addition, members will supplement classroom work at teachers' request.

Honors Programs

Talented college students will be challenged this coming school year and given special opportunities in honors programs being initiated by a growing number of institutions. The Inter-University Committee on the Superior Student estimates that 125 colleges and universities have organized such programs within the past two years and that scores of other institutions are contemplating the move.

Typical of new honors programs getting underway this term:

- Kent State University, Ohio—In a four-year program starting with freshmen only this year, from fifty to one hundred students (out of 2,500) will enroll in special economics, English, geology, German, history, industrial arts, philosophy, and political science sections. Classes will range from five to twenty students.
- The University of Texas college of business administration—

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Outstanding freshmen will receive "intensive and rigorous" work in English, mathematics, economics, and business administration.

• Vassar College, Poughkeepsie, N. Y.—Program is offered to qualified juniors and seniors. A new curriculum change will also stress independent study.

• Miami University, Oxford, Ohio —Students of unusual promise will have an opportunity to work at a faster rate and in broader scope than other students. Students will be able to skip elementary courses, attend small discussion classes, and study more independently.

Gray Flannel Students

New trend: young executives are receiving time off—with pay—from their companies to return to college for executive development programs. Although most companies feel the long-range benefits more than offset the expense and temporary manpower loss, some companies have been reluctant to let middle-level managers take long periods off.

This attitude was a factor that caused Harvard Business School to cut its middle management program from eight months to seventeen weeks.

Northeastern University, in Boston, has come up with a different solution to the problem. The school's new seven-week executive development program, opening Sept. 11, will have a staggered schedule. Participants will spend one week on the campus and three weeks back on the job. The plan is intended to soften the impact of their company absence and to quicken the application of their studies.

A scholarship program to train union members for careers in the international labor field has been established by the New York School of Industrial and Labor Relations at Cornell.

Under the International Labor Training Program, selected American trade union members will study at Cornell for nine months, then serve a one-year internship with a union or government agency concerned with international labor.

American Education Builds Class Society

Hurling a bombshell at educators fighting to maintain the status quo, Brendan Sexton, coordinator of education for the United Auto Workers, last month charged that "no more effective way for building a class society has yet been devised" than American educational practices.

Striking out at educators' reliance upon the IQ score as a measure of discovering gifted students, he charged that we may be in danger "of creating a social structure restricted by class lines which will be fixed for the individual while he is still a child."

The labor leader criticized IQ-based programs for the gifted. Sexton claims this kind of selection means that with few exceptions the gifted are chosen from among the upper income groups in our society. He charged, "If we chose children based

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This photograph, taken with bright sunlight on the window, demonstrates the complete absence of glare, the uniform lighting afforded by Temlite Loomwood Shades. Better ventilation, too, even when shades are completely down. Temlite Loomwood's beveled splints allow free passage of air through the entire shade area. Incoming air is deflected toward the ceiling creating a continuous flow of fresh air without drafts . . . an overall type of ventilation medical authorities prefer.

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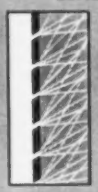

Beveled splints block direct sunlight and direct diffused light toward the ceiling. Glare-free light is reflected farther back into room.

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upon income, we would be more honest and less cruel than we are now, with our pretensions that the use of the IQ is fair and adequate."

Sexton scored IQ ratings as variable, influenced by motivation, and dependent upon the child's ability to manipulate language. "They are strongly biased in favor of the child who comes from a home in which language is used skillfully."

Longer School Year

In order to handle sharply increasing enrollments in American schools and colleges, many educators agree they will have to lengthen the school year, possibly to a year-round schedule.

Michigan may become the first state to experiment with a high school trimester plan. Officials of Delta College in Saginaw are urging some high schools in Saginaw, Bay, or Midland counties to adopt such a program in cooperation with the college.

When Delta opens a year from now, it will be the first two-year college in the nation using the trimester system, according to its president, Dr. Samuel D. Marble.

The trimester plan was developed by the University of Pittsburgh, still the only degree-granting institution using it. University officials are pleased with the plan, points out Marble, but their greatest problem is articulation with the high school program.

Michigan State University, one of the first schools in the nation to go on four-quarter, all-year operation, reports that operating a large university full-time saves taxpayers money and provides better service to students. Since 1958 MSU has been in regular session forty-six weeks a year.

Illinois Commission of Higher Education has urged the six state universities to begin plans immediately for a longer school year and greater use of their classrooms and facilities. The schools were advised to adopt a forty-eight week calendar and to schedule classes from 8 a.m. to 9 p.m. five days a week, and from 8 a.m. to 1 p.m. on Saturday.

Stress on M.A.

The master's degree, rather than the doctorate, is receiving new attention as the basic qualification for college teaching. Efforts to strengthen the master's degree received a big boost last month from a series of grants by the Ford Foundation "to expand, speed, and improve the preparation of college teachers." New grants total $2,355,000.

Expansion of college faculties is making the master's degree the predominant level of preparation for most newly employed college teachers, the Foundation believes.

Fourteen universities received grants to inaugurate new, three-year programs that will span the last two years of college and the first year of graduate school and lead to the master's degree.

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master's degree is a logical and strategic means of strengthening the quality of instruction in American colleges and universities," explained Clarence H. Faust, a vice president of the Foundation.

Around the World

Student protests and demonstrations in Burma have barred a more rigorous examination system that was to have been instituted in the nation's high schools and universities.

Educators considered the reforms necessary to raise academic standards on the university level, but students argued that this would make it too difficult to enter the nation's two universities.

The students pressured Premier U Nu to intervene on their behalf against university officials. However, the premier said he agrees with the teachers that the proposed changes would raise educational standards.

The exams would have added a year to the high school training of university-bound students. This year, fewer than 6,000 of the 80,000 students who took the qualifying university matriculation examination passed, and teachers are pointing to this deficiency in arguing for tighter standards.

India has been turning away tens of thousands of students eager to enter college. Grossly inadequate facilities is the cause.

Thirty-nine Indian universities began a new academic year within the past month—one more than a year ago—but there are about 50,000 more students than last year. Total college population is estimated at 900,000.

College admissions in India are determined exclusively on the basis of entrance examinations, with students accepted solely on how well they do on comprehensives. Part of the rush to college is attributed to the high prestige of a college degree. Many students are found to lose interest in studies once they are admitted.

Half-way around the world, a "University of Europe" has been approved by legislators of six nations meeting in the European Parliamentary Assembly. France, West Germany, Italy, and the Benelux countries adopted a resolution urging the six governments to act quickly to open the University in Florence, Italy, by October, 1961.

The University would open with about 500 graduate students, with undergraduate courses added later. It would not be limited, either in teaching staff or student body, to students from the six nations.

Non-Western Studies

Efforts to strengthen American college studies on Asia, Africa, the Near East, the Soviet Union, and Eastern Europe received a shot in the arm last month with a $15.1 million program by the Ford Foundation.

Ford announced grants to Columbia, Harvard, and the University of California to help them put non-

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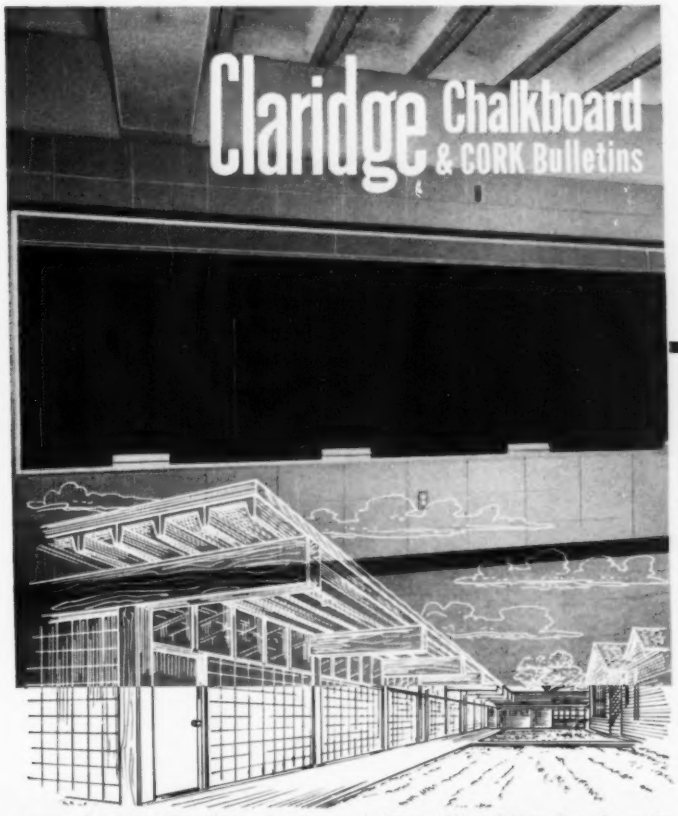

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Western and related international studies into their permanent academic programs. The grants represent a new attack on what Ford considers to be a serious imbalance between Western and non-Western studies in American higher education.

Foundation vice president Clarence Faust explained that the grants will also help develop related programs in public and business administration, law, public health, education, and international relations.

Two to Four

Stephens College, Columbia, Mo., breaks its long tradition as a two-year college this month to expand its programs leading to the bachelor of fine arts degree. The woman's college will offer degrees in music, theater arts, fashion design, and dance.

Stephens pioneered in the junior college movement fifty years ago.

A grant from the Fund for the Advancement of Education will enable Stephens also to start an experimental educational program known as the College House Plan which will use residential facilities as centers for learning.

President Seymour A. Smith hopes to develop new patterns in use of faculty and counseling staff and more flexible class organization and scheduling.

Problems!

The "population explosion" is giving most school administrators their biggest headaches. This was the conclusion of superintendents from thirty-three states who attended their annual work conference at Columbia Teachers College.

Other chief problems:

- The need for better understanding between schools and the public.
- Education of the gifted.
- School financing.
- Teacher education and retaining good teachers.
- Drop-outs from school, attendance, promotion, and caring for emotionally unstable pupils.

Parochial Plea

Three organizations have been named by a Catholic educator as preventing government aid to Catholic schools in this or the next generation.

The National Council of Churches, the National Education Association, and the American Civil Liberties Union are emphatically opposed to aid for Catholic schools, declared Father Robert F. Drinan, S. J., dean of Boston College's law school.

Arguing for state or federal aid for Catholic schools, Father Drinan said that Catholic parents are unjustly penalized financially for exercising their right to guide their child's education. They contribute toward tax support of the public

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school system which their children do not use, he said, and receive no aid toward maintenance of the Catholic school system. Sighed Father Drinan: "While these arguments seem self-evident to Catholics, virtually no non-Catholics find them convincing."

New Math on TV

Continental Classroom, NBC-TV's program for college credit, goes on the air for the third consecutive year Sept. 26 with Contemporary Mathematics (first semester—modern algebra; second semester—probability and statistics).

A special textbook by TV teacher Dr. John L. Kelley, head of the department of mathematics at University of California, goes on sale Sept. 15.

"A critical demand for adequately prepared mathematics teachers currently exists," said Dr. John E. Ivey, Jr., president of Learning Resources Institute, one of the co-sponsors.

Illuminating Africa

Tom Mboya, African trade union leader and a director of the African-American Students Foundation, told a select group at the Carnegie Endowment International Center that the U. S. was not "realistically" meeting the problems of educational aid to Africans. Mboya asked that the U. S. and the Soviet Union funnel educational resources through the United Nations, even though that group, he said, was not now doing as much as it should to help emergent African nations.

Mboya noted that 110 students from his native Kenya are now in U. S. colleges and universities, added that 250 might come next year.

The U. S. Office of Education, meanwhile, announced the award of $64,491 to Georgetown University for the teaching of Sutu, Ubundu, and Ganda, three of the Bantu language family of Africa. Other languages, such as Rini, Yoruba, Twi,

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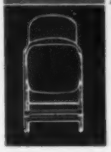

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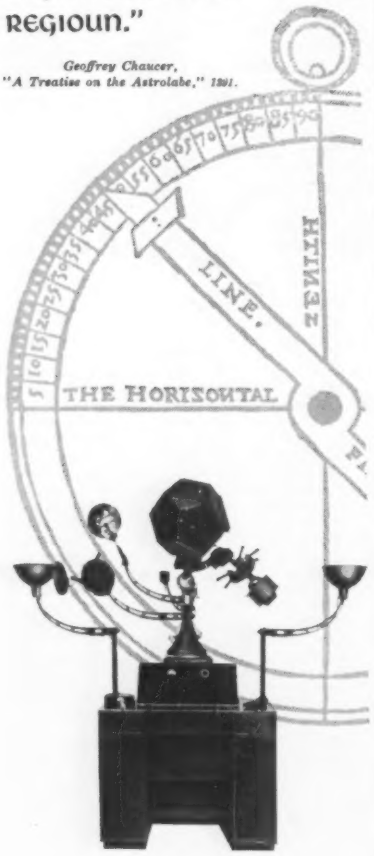
"...truste wel that alle the conclusions that han be founde, or ellys might be founde in so noble an instrument as is an astrelabie ben unknowe parfitly to eny mortal man in this regioun."

Geoffrey Chaucer,
"A Treatise on the Astrolabe," 1391.



Chaucer's treatise, written for his son, explained the most advanced scientific astronomical instrument of the time, the astrolabe. Today's "mortal man"—and child—have the privilege of studying astronomy and the space sciences with the aid of the precision engineered Standard Model Spitz Planetarium.

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and Swahili will also get proper attention.

Georgetown is most famous for its graduates now serving in the U. S. State Department. A Department employee, Robert H. Thayer, cultural relations assistant, told a Harvard audience that "we do not really have an international educational policy, and this I think we need."

South Needs MD's

Maryland played host to the annual Legislative Work Conference of the Southern Regional Education Board and heard some hard facts about the doctor shortage in the South.

Dr. Winfred Godwin, SREB associate director for development, told delegates (legislators and educators) that the sixteen-state area would have to produce at least 15,000 doctors during the next fifteen years in order to provide medical aid for its expanding population. Dr. Godwin advanced a three-point program: more four-year medical schools, maximum use of present facilities, and rapid expansion of medical schools now operating.

The South now has 101 physicians for every 100,000 population. National average: 129 per 100,000.

Over 100,000 children of migrant farm laborers are born to the road, have no home of their own and no desk of their own. Beyond the jurisdiction of any school system, they form a pocket of poverty and ignorance. Next month a report in depth on

THE MIGRANT CHILD

The kind of responsible coverage found every month in

OVERVIEW

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THE FARQUHAR STAR–TERRESTRIAL GLOBE acquaints the student with his universe and orients him to his earth, his sun and the rest of his stars.

ST-12" diameter ..... $ 49.50
ST-20" " (pictured) 115.00

THE FARQUHAR TRANS–PARENT TERRESTRIAL GLOBE acquaints the student with his earth. The world becomes round under his feet.

TT-14" diameter (pictured) $ 29.00
TT-24" " 125.00
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FARQUHAR TRANSPARENT GLOBES
3724 Irving St., Philadelphia 4, Pa.
Telephone EVergreen 2-2833

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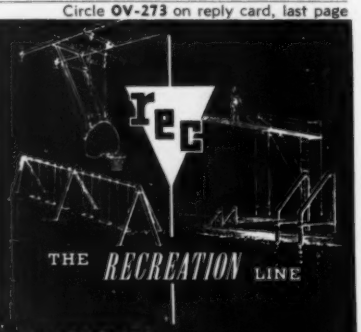

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Recreation equipment with engineered safety to meet the most rigid requirements.

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Literature for each line available on request—please specify.

DEALER INQUIRIES INVITED

RECREATION EQUIPMENT CORP
Dept. O-260 — 724 W. 8th St.
Anderson, Indiana

However, a controversy of growing importance is centering around the use of foreign-trained interns and physicians. The N.J. Board of Medical Examiners has ruled graduates of foreign medical schools (except Canadian) will not be accredited for practice until they complete three years of interning in America. But in a letter to the N.Y. *Times*, Dr. J. M. Emmett and Julian Beckwith of the University of Virginia Hospital appealed for a more reasonable attitude, pointing out that "there is not a sufficient number of available graduates from our own medical schools to fill the vacancies" in U. S. hospitals right now.

Lonely Vandals

When students feel dissociated from their schools, property damage results, a two-year study of vandalism at Syracuse University has discovered.

Dr. Nathan Goldman, who conducted the study, explained: "When members of the school group have a sense of belonging to the school, and when they feel that the school belongs to them, morale tends to be high and damage low. But where there is little sense of belonging, we can expect to find a greater amount of property damage."

Quote/Unquote

"The one freedom citizens do not and should not have is freedom to abdicate citizen responsibility. Their and our nation's survival depends on getting politics handled responsibly." —*Dr. Harry J. Skornia, president, National Association of Educational Broadcasters.*

* * *

"The education which is most serviceable in the long run involves more than training and a crowding in of knowledge. It involves outreach of mind and the freeing of man from routine responses so that he can direct his choices with foresight and purpose.—*Dr. Robert F. Goheen, President, Princeton Univ.* ●

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A New "HELPING HAND" for . . .

GUIDANCE COUNSELORS

IMC

instructional material centers

This new IMC unit can be an important visual help for Guidance Counselors . . . for literature, graphic displays, product illustrations .

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NOTICE:
This unit has already been determined by many states as suitable for approval under the NDEA title V program.

FREEDMAN AIRCRAFT ENGINEERING
P. O. Box 222, Charlevoix, Mich.

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SET THE STAGE FOR MORE ADVENTURE IN ART WITH STALEY-PRANG!

One of the amazing things about the Sta-Flo Prang Color Mixing Method is that it appeals to both Art Supervisors and Classroom teachers. The expansive programs are simple enough to stimulate creativity in elementary classrooms yet challenging enough to inspire the advanced student and artist.

Creative-Wise! Budget-Wise!

This happy color mixing method costs considerably less than many comparable materials, and helps assure new creative heights in your teaching program. Prang Powder Tempera and Staley Liquid Starch are readily available at your favorite source of supply.

Write today for our free new booklet "Fun With Sta-Flo Liquid Starch". Dept. OV-2.

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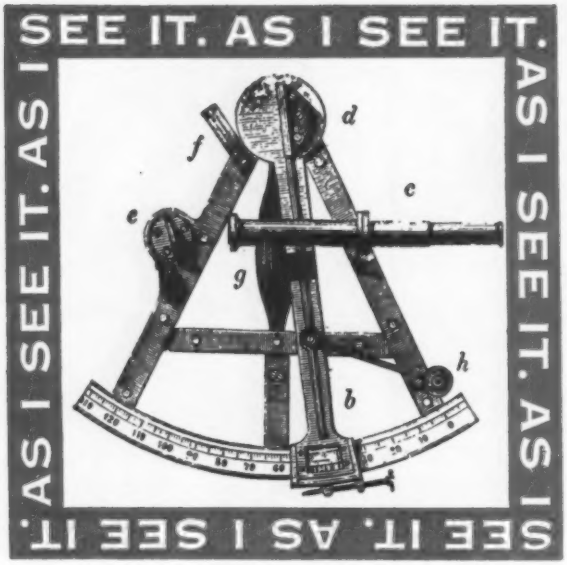


Educational Leadership

Walter D. Cocking comments on the current scene

RECENTLY I HAVE had the opportunity to view several school and college staffs in action. Once again it has been borne in on me that the one element beyond all others which determines the dynamism of any educational situation is the quality of its leadership.

I have witnessed some situations in both school and college where the leadership has unmistakably shown a distaste for anything other than the status quo. It was evident that new problems were being avoided as long as possible. It was as if a memorandum had been issued: "Avoid anything new and different. Do only what you have been doing. At all costs, do not propose or start anything which will attract attention or controversy." The staffs in such situations were frequently restless and critical; yet it was evident that they followed the apparent wish of the leaders to avoid new departures. The result was lethargy, growing indifference, complacency. Worse, there was a failure to plan and act and to make education a force for action. I am convinced that the real block is the quality of educational leadership at the top.

I have seen other situations quite the reverse. Emphasis was on research to discover new and better ways of doing things, experimentation, planning, teamwork. It seemed that each staff member felt a personal responsibility to make things happen. One could feel the glow of adventure and accomplishment. In all such cases, the basic reason for such attitudes and procedures is found again in the quality of leadership provided by the chief administrator. He is a man of action seeking ways for his agency to be more effective. He has courage and dares to take a calculated risk. His example seems to bestir his associates and his community to action. They see education as a dynamic force.

What causes some leadership to be powerful while other is weak? The phenomenon can be observed but the key to it is difficult and baffling.

There may be several factors which provide the answer.

All people want security. Some try to find it through inaction, others seek it through action.

Some in leadership positions just don't know what to do or how to do it, so they do nothing. The strong leaders bring their best thought and that of their associates to bear on a problem, and then, having reached a conclusion, dare to try.

For some, an issue or a new problem serves as a goal to action. To others, new problems cause doubt, uncertainty, and hence inaction.

The adventure found in new situations accelerates some to action, and brings out the best one has. Adventure to others is abhorrent, creates a real fear of the unknown, results in doing nothing.

And some people seem born for leadership roles while others are born to "followship." It is tragic when the latter are precipitated into a leadership role.

What does all this mean for the selection and preparation of educational leaders? As I see it, it means that we must select the potential leaders much more carefully and intelligently. Only those who demonstrate potential for leadership should be permitted to qualify for top educational posts. It also means that the preparation program must emphasize, much more than it has, planning and putting programs into action.

If education is to be the force which thoughtful people predict it will be, our colleges and schools must have more dynamic, intelligent, and forceful leadership than we have had in the past. ●

THIS MONTH'S PRODUCT PREVIEW

More Tools for Teaching

SCIENCE FILM SERIES

The excitement of the scientific world communicates to all in this most useful group of ten films, in 16mm color and sound. Looking over the shoulder of the scientist telling

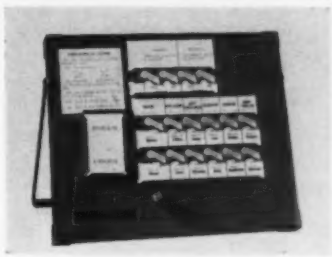
about his work, one is bound to be both informed and stimulated by the enthusiasm shown by these dedicated people. Of special interest to that group of junior and senior high school students about to make career decisions.

Titles are: *Visual Perception,* an examination of the way we "see" the world around us; *The Worlds of Dr. Vishniac,* extraordinary microscopic photography of living creatures and insights into the complexities of evolving life; *Exploring the Edge of Space,* development and use of plastic balloon systems; *"Thinking" Machines,* approaches and experiments in machine intelligence; *The Mathematician and the River,* relationships between the abstract world of mathematics and the real world of nature; *New Lives for Old,* a case history in cultural anthropology; *Project Mohole,* first filmed report on the project to drill a hole to the mantle of the earth; *The Realm of the Galaxies,* an inquiry into the farthest reaches of the universe; *The Flow of Life,* basic research in the micro-circulation of blood and the capillary bed; and *Neutrons and the Heart of Matter* (illustrated) exploring the nature of matter and the significance of the neutron's behavior. Educational Testing Service, Princeton, N.J.

Circle **OV-301** on reply card, last page

VOTING MACHINE MODEL

With Nov. 8 coming up, an instruction model of an actual voting machine is available for teaching students in social studies classes how to cast a ballot. It presents a portion of the kind of ballot used in real units, including referenda questions, and provides the voting machine mechanisms that prevent spoiling a ballot by inadvertently voting for two candidates for a single office. The model also has the lever that removes the indication of the voter's choice when he has finished making his selection. Automatic Voting Machine Div., Rockwell Mfg. Co., Jamestown, N. Y.



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ELECTRONICS TEACHING AID

Latest in the parade of electronic teaching devices is Model 50, a multiple choice machine, developed by Switchcraft. Problems are presented on a workbook that rests on top of the machine between two rows of buttons. The student simply indicates his answer to the questions in the booklet by depressing the button adjacent to his selected response. Verification of the answer is immediate by a buzzer.

Program material for the multiple choice teaching aid includes reading comprehension, mathematics, geography and biology. Switchcraft, Inc., 5555 N. Elston Ave., Chicago 30, Ill.

Circle **OV-303** on reply card, last page

CRYSTAL LATTICE MODEL KIT

Crystal Lattice Model Construction Kits provide excellent three-dimensional visual demonstrations of the crystal structure of matter for chemistry, solid state physics, and mineralogy. Kits contain red, white and green spheres the size of table tennis balls with two diametrically opposed holes drilled in them, steel needles with magnetic bases, rubber washers to position the balls on the needles, and a steel base plate. The

(Continued next page)

plate can be inclined to show oblique lattice planes from every side. Arthur S. LaPine and Co., 6001 S. Knox Ave., Chicago 29, Ill.

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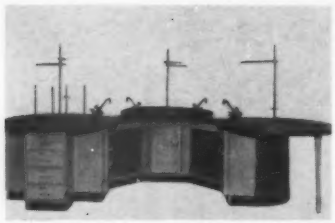
SCIENCE ROOM FURNITURE

Science Circle Furniture by Sjostrom is a new concept designed to provide maximum work space plus high quality construction at low cost. The line features circular tops, a



choice of several storage bases, and inter-connecting sinks. It is possible to use only one connector sink with every two work tables (see illustration), which further controls costs. The picture shows a composite unit arranged in "V" formation. Such a unit will accommodate 12 students, four at each table. Note the three different base units for various storage needs. John E. Sjostrom Co., 1717 N. 10 St., Philadelphia 22, Pa.

Circle **OV-305** on reply card, last page

POLARIZED LIGHT

Several new low-cost classroom aids for teaching the principles of polarized light are available: The Pioneer Tabletop model, the Advanced Classroom Demonstrator, and the Basic Classroom Demonstrator.

The Tabletop unit is for large class instruction. It demonstrates the

theory that light travels in a complex arrangement of transverse wave motions. The Advanced Classroom Demonstrator is used for more detailed experimentation and consists of a comprehensive selection of 14 polarized materials. The Basic unit is geared to small group or individual use and includes two polarizers, specimens of mica, benzoic and calcite, and instructions. Pioneer Scientific Corp., Sub. of Bausch & Lomb Co., 645 St. Paul St., Rochester 2, N. Y.

Circle **OV-306** on reply card, last page

MOLECULAR MODEL

There has long been a need for a molecular model which gives a more precise picture of stereochemical relationships. The Cenco-Peterson Molecular Model Kit does just that. The basic units are a series of colored neoprene balls with threaded aluminum inserts molded into them. The inserts are accurately placed at the theoretical bond angles. The elastic nature of the neoprene automatically distributes strain to all the bond angles involved.

Complete set includes 59 flexible neoprene atoms and 55 rigid poly-

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MAXIMUM USE OF
ALL AVAILABLE FLOOR SPACE!

A space saver for balcony installations...

- **SAFE**

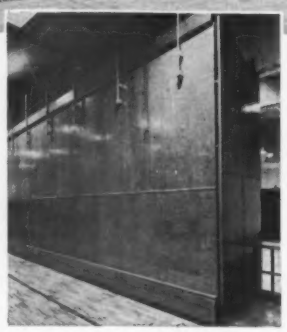
EZ-A-WAY Forward Close•Delayed Action Gym Seats cannot overturn. Our new floor track design provides positive floor attachment in every position.

- **CONVENIENT**

EZ-A-WAY Forward Close•Delayed Action Gym Seats are easy to use . . . swinging rear riser board offers plenty of toe space for opening . . . gym seats can be locked in the open or closed positions.

- **MODERN**

EZ-A-WAY Forward Close•Delayed Action Gym Seats offer maximum utilization of available space. When closed they form a wall to separate a balcony into a modern room - for gym classes, dances and any other school activities.



FEATURES . . .

- Furnished with and without rear seat.
- Rear riser board may be swung up for opening and closing bleacher . . . plenty of toe space for operator.
- Positive foolproof linkage to floor.
- Owner can have peace of mind that bleacher cannot be pushed over edge of balcony even under abuse.
- Floor attached bracket and track are under bleacher in both extended and closed position . . . completely out of sight.

Write for complete details and engineering data for your requirements.

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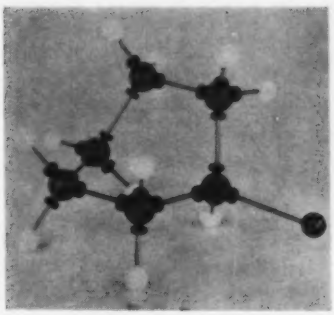


styrene monovalent atoms, plus the bonds and fittings. Central Scientific Co., 1700 Irving Park Rd., Chicago, Ill.

Circle **OV-307** on reply card, last page

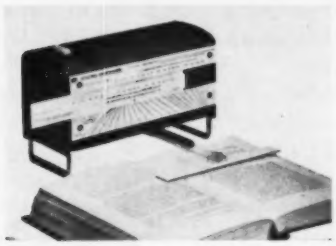
REAR PROJECTION SCREENS

Polacoat announces a new line of portable daylight rear projection screens. The screen frame is easily assembled from sections of tubular parts to which the elastic screen panel is hooked. The screen membrane is of flexible Lenscreen material, a vinyl-latex plastic permeated with special lens cells. Screens are produced in all popular sizes and include extra wide sizes for side-by-side or "dual" presentations. Polacoat, Inc., Blue Ash, Ohio.

Circle **OV-308** on reply card, last page

READING PACER

A new Model C Reading Rateometer now makes the Rateometer available in three overlapping speed ranges to meet classroom needs at all levels. This device is an electric reading pacer used for the improvement of reading speed and comprehension for all ages beyond fourth grade.



The standard range unit, Model A, guides reading at any selected speed from 70 to 2500 words per minute. Model B has a slower range, 50 to 500 words per minute, and is especially designed for use with slower remedial students. The new Model C has a faster range, 140 to 5000 words per minute, and is used in special speed reading programs for mature readers.

All three models have a convenient reading calculator mounted on the face of the unit. Audio-Visual Research Co., 523 S. Plymouth Court, Chicago 5, Ill.

Circle **OV-309** on reply card, last page

OPTICAL KIT

The kit shown is a useful introduction to optics and astronomy.

Contents include: a prism for view-

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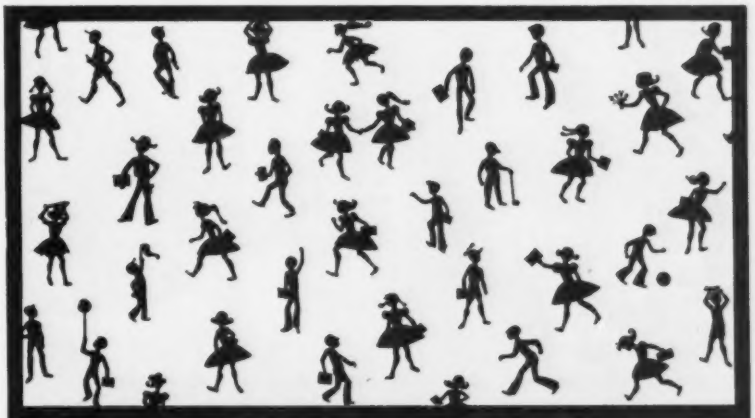

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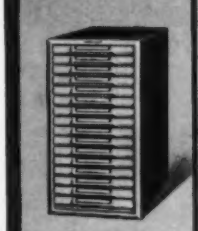
SIMPLIFY RECORD HANDLING TO KEEP PACE WITH RECORD ENROLLMENTS



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Versatile file controls individual pupil records.

COMPACT CLASS RECORDS
A complete class record at a flip of the finger.

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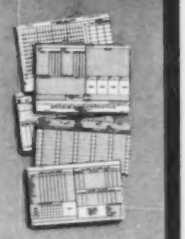
Grades, enrollment, vital statistics at a glance.



PRE-PRINTED RECORD CARDS
Easy to read cards for all school records and needs.

Turn paperwork . . . teacher's pet peeve, into teacher's pet! Simplify all your record handling problems simply by using Acme Visible School Records and Systems.

For instance, now on just one Acme Visible record card, a student's complete school record! Background, grades, test results, even attendance . . . available at a glance. No need for a half-dozen different cards requiring duplication of entries and a waste of teaching time.

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ing the spectrum and conducting experiments; star and satellite path finder and instruction book; piece of diffraction grating which breaks up light into its component colors; a magnifier; two polarizing filters for use on microscope or for making a polariscope; five double convex lenses for making high powered magnifiers, and an instruction and information book. Edmund Scientific Co., Barrington, N. J.

Circle **OV-310** on reply card, last page

LANGUAGE LABORATORY CONSOLE

The flexible design of the Rheem-Califone console provides space for entire language laboratory controls, amplification equipment and master sources. The desk-type design allows the teacher to be seated without obstructing his view of the class. One unit can contain up to four tape

decks and a record player, along with switch panels for communication with up to 45 students.

Constructed of hardwood birch plywood in natural satin finish. Ample storage space for tapes, headphone, microphone, books. Rheem Califone Corp., 1020 N. LaBrea Ave., Hollywood 38, Calif.

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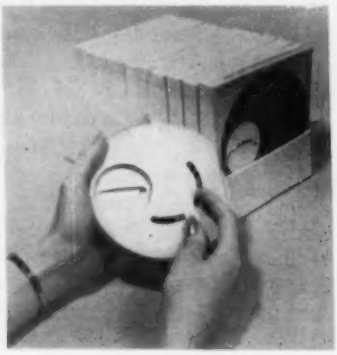
INDIVIDUAL TACHISTOSCOPE

Flash-X training can help the beginning reader to learn sight vocabulary, a child to master arithmetic facts, a shorthand student to memorize brief forms, and a file clerk to become more accurate. Of durable, all-metal construction, the Flash-X



has a single exposure speed of 1/25 second and a manual check. Discs of 40 exposures are easily inserted and rotated for successive exposures. Eighteen graded sets of training materials are available in word recognition, spelling, arithmetic, and vocabulary as well as for general accuracy development. Blank discs make possible easy preparation of special materials. Educational Development Laboratories, 75 Prospect St., Huntington, N. Y.

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HUMAN SKULL

Anatomically correct and easily disassembled, an unbreakable plastic,

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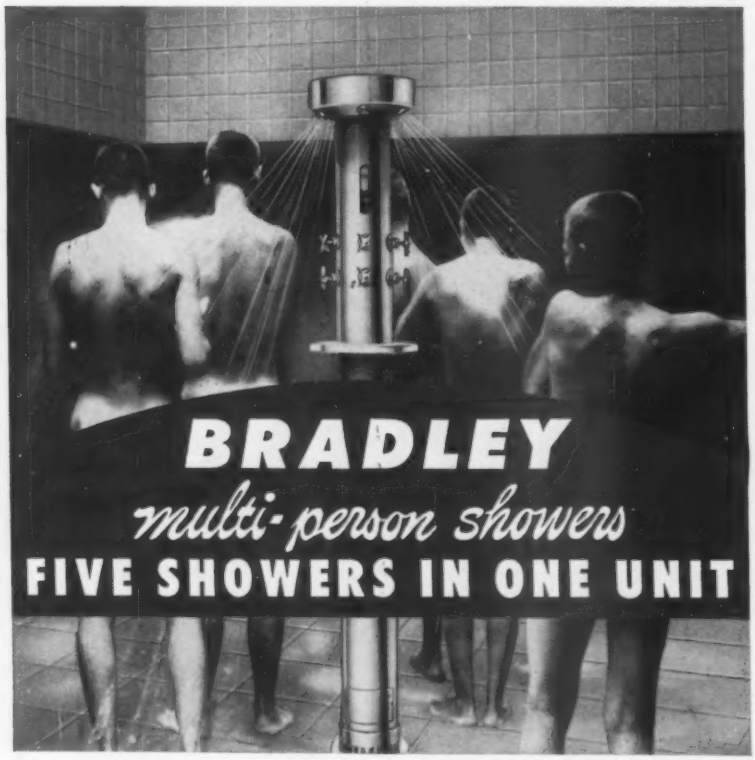

Shower facilities can now be installed quickly, at low cost and in small space.

Thousands of students in schools and colleges enjoy facilities provided by Bradley Multi-Person Shower Columns as shown above. One column has 5 shower heads—but requires *one* set of piping connections. Yet each bather has individual control of water volume and temperature. Soap dispensers are also available. For Girl groups, the same Shower Column is supplied with 5 stall-separating partitions and with curtains for greater privacy if desired.

To insure top sanitary wash and shower facilities—install Bradleys. All models are illustrated in Bulletin H-1322—copy mailed on request.

BRADLEY WASHFOUNTAIN CO., 2233 West Michigan Street, Milwaukee 1, Wisconsin.

Same Column with stall-separating partitions and curtains.

Bradley

Write for Bulletin H-1322

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CENTRALIZE
your food preparation
and **SAVE MONEY**
with--

AERVOID
Vacuum Insulated Carrier-Dispensers

- **Greatest Durability**
- **Highest Permanent Thermal Efficiency**
- **Unequaled Sanitation**

Eliminate Costly Duplication Of Equipment, Labor And Space By Adopting The "AerVoiD-Central Kitchen System"

Serve Food or Beverages piping Hot or refreshingly Cold to any number of people, at any number of locations, any distance, with Portable "AerVoiDs" — Their permanently efficient VACUUM-INSULATION does not settle, shrink or deteriorate. It provides a positive "Safeguard" against insanitary leakage, because it requires Air-Tight Construction of the Greatest Durability — Specify "AerVoiD" to be Sure!

IN COMPLIANCE With Sanitary Construction Requirements (Ordinance And Code Pub. No. 37) OF THE U S PUBLIC HEALTH SERVICE

- **Highest In Quality**
- **Lowest In Cost**

Write for FREE Literature Kit OV-23

Vacuum Can Co.
19S. Hoyne Ave., Chicago 12, Ill., U.S.A.

life-size human skull is low in cost. Parts take apart and snap together easily. Skull cap is removable for examination of cavities and orifices. Spring-action lower jaw is complete with teeth.

Comes with display stand, instruction and anatomy chart. Ideal for medical, dental schools. Edmund Scientific Co., Barrington, N. J.

Circle OV-313 on reply card, last page

TABLE TENNIS TABLE

Brinktun Fold-N-Roll tennis tables open in one easy motion; fold and

lock into closed position in seconds. When closed, the top folds inward to give complete protection to the playing surface in storage. The net remains in playing position at all times.

The Professional Model (illustrated) is built for the extra heavy duty that school conditions require and is designed for professional play. Brinktun, Inc., 710 N. Fourth St., Minneapolis, Minn.

Circle OV-314 on reply card, last page

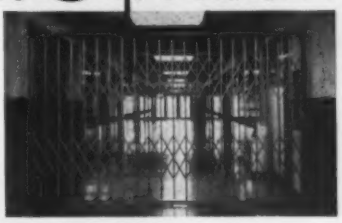
SOUND SYSTEM

The Rhythmaster is a portable, multi-speed high fidelity sound system that has particular application

in teaching skills with synchronized movement such as dancing, typing, skating, swimming, calisthenics, etc. Turntable permits playing speed to be continuously varied from 25 to

Circle OV-280 on reply card, last page

it's Superior...



because

- EASE OF OPERATION
- AS STRONG AS STEEL, *With One-Third the Weight*
- NYLON SELF-LUBRICATING ROLLERS
- LOW MAINTENANCE
- LASTING APPEARANCE *Choice of Alumilite or Lacquer Finish*
- EASE OF INSTALLATION — *No Permanent Ceiling Tracks Necessary*

EXTRUDED ALUMINUM COLLAPSIBLE CORRIDOR GATES

The principle use of SUPERIOR collapsible gates in modern school corridors is to direct and control internal traffic during functions in the school, preventing unauthorized entrance or exit in given areas.

GYMNASIUM BOX LOCKERS

Designed by SUPERIOR to reduce locker room congestion

and provide safe, neat, permanent storage for students and instructors.

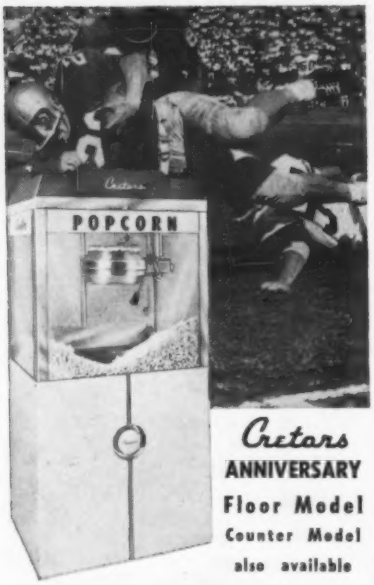
WIRE MESH PARTITIONS

SUPERIOR wire mesh partitions provide storage facilities for tools and workshop equipment, protection for boiler room machinery and allows maximum safety and space utilization for servicing swimming pools and gymnasium functions.

FOR FURTHER INFORMATION, WRITE

Superior
WIRE & IRON PRODUCTS, INC.
1045 EAST 76TH STREET
CHICAGO 19, ILLINOIS

Circle **OV-282** on reply card, last page



Cretors
ANNIVERSARY
Floor Model
Counter Model
also available

POPCORN—
8¢ PROFIT
from a 10¢ Sale

No other snack food is as POP-ular.

No other school concession produces as much PROFIT as POPCORN.

This Cretors Anniversary Model is especially designed for schools. It can be operated by students to produce maximum profits on a small investment.

The Cretors Anniversary Model features the exclusive CORN-ditioner — filters hot air through the popped Corn to keep it fresh, crisp and tasty.

PAY AS YOU EARN

Delayed payment plan available

Our 75th Anniversary

Cretors and Co.
SINCE 1885
POPCORN BUILDING NASHVILLE, TENN.
FACTORY: CHICAGO, ILL.

Products (continued)

100 r.p.m. for use with records of all speeds. Rek-O-Kut Co., Inc., Corona, N. Y.

Circle **OV-315** on reply card, last page

WINDOW WASHER

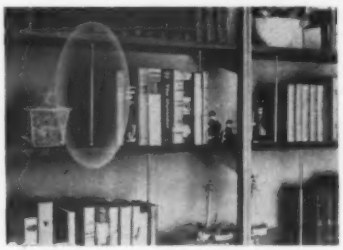
The operator can remain on the ground, yet wash windows at heights

up to 66 feet with the Tucker Model No. 6½ Window Washer. New telescopic handles make this possible. These handles can also be reduced and separated into sections so that basement, first, second and third floor windows can be washed with ease. Tucker Mfg. Co., 112 Fourth Ave., S.E., Cedar Rapids, Iowa.

Circle **OV-316** on reply card, last page

BOOK ENDS

Shelvies neatly solve the problem of holding books, records, folders, mag-



azines upright. Handsomely designed of slender anodized aluminum, spring loaded for tension, with non-marking white rubber tips. Easily adjusts to any shelf height from 9½" to 14". Hahn Co., 2311 Fox Hills Drive, Los Angeles 64, Calif.

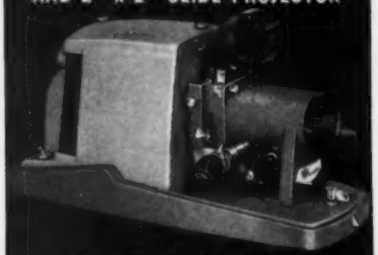
Circle **OV-317** on reply card, last page

Circle **OV-283** on reply card, last page

No Matter How You Look At It...
Viewlex Projectors
Are Easier To Teach With

Viewlex V-500-P is literally "easier to teach with" and "easier to learn with" from every point of view! Students LEARN MORE because V-500-P frees you to TEACH MORE! The unprecedented image-brilliance compels attention, even in lighted rooms . . . the simplified operation of self-threading and take-up that ends awkward, time-consuming "fumbling" ...the built-in magnifier viewer that enlarges any section for special emphasis—these, and many other built-in Viewlex "teaching assistants" in new V-500-P make learning certain; teaching faster, easier!

Viewlex
V-500-P
COMBINATION 35MM FILMSTRIP AND 2" x 2" SLIDE PROJECTOR



Ask your Viewlex Audio-Visual franchised dealer for a demonstration, or write for catalog.

NEW! Multi-Focal Accessory Lens — infinitely adjustable 3½" to 6" focal length produces full screen image at any distance without moving projector or refocusing. **$49.50**

VIEWLEX INC. 35-32 Queens Boulevard
Long Island City 1, N. Y.
IN CANADA: Anglo Photo Ltd., Montreal

Circle **OV-284** on reply card, last page

The KEYSTONE Standard Overhead Projector

is available for purchase under the

National Defense Education Act

The Keystone Standard Overhead Projector is designed for the projection of Transparencies, Standard (3¼" x 4") Lantern Slides, Polaroid Slides, and Handmade Lantern Slides or, with appropriate accessories Tachistoslides (4" x 7"), 2" or 2¼" Slides, Strip Film, and Microscopic Slides. It is useful—

In the Science Category with appropriate units of slides in Physics, Biology, General Science, Health, Hygiene, Physiography, and Elementary Science.

In the Mathematics Category in teaching Number-Combinations and Fraction-Combinations tachistoscopically; Solid Geometry with Stereograms.

In the Modern Languages Category in teaching French, Spanish, German and Russian with Tachistoscopic Units.

Write for Further Information or a Demonstration by our Local Representative. KEYSTONE VIEW CO., Meadville, Pa.

Since 1892, Producers of Superior Visual Aids

Circle **OV-285** on reply card, last page

GOUGLER

Type No. 40

MASTER KEY COMBINATION LOCKS

These sturdy, high security locks use a new type master key, not duplicable on key machines, for proper control and maximum protection. They feature "clicking" combinations, no need to read, just count clicks and open —even in the dark.

Similar non-master key lock, No. 30/1, available.

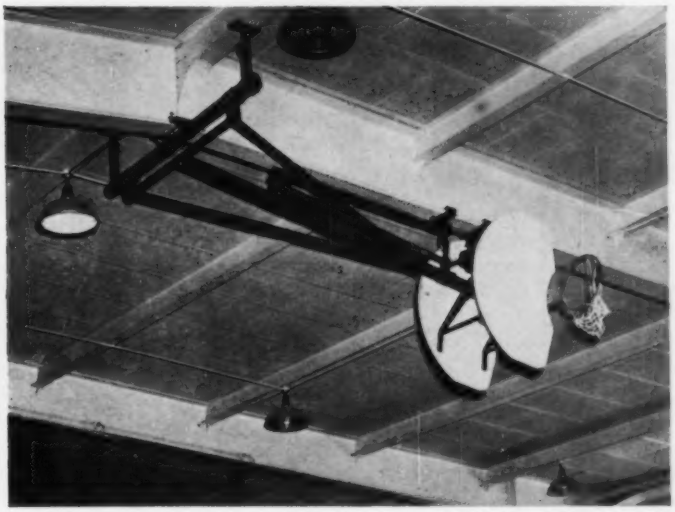
BUY NOW! TAKE TWO YEARS TO PAY!

Ordering now will help us deliver on schedule. Our credit plan, with no interest charged, will help you build locker fund and assure proper school security.

Write for sample, prices and 2 years credit plan.

C. L. GOUGLER KEYLESS LOCK CO.
711 Lake St. **Kent, Ohio**

Circle **OV-286** on reply card, last page



E-Z FOLD

Basketball Backstop

with Two Bankboards in Center of Gym at ROLLA, KANSAS

The patrons of the Rolla, Kansas School District are well pleased with their E-Z Fold basketball backstop installation.

One Dual Backstop Meant a Saving of the Cost of Two Backstops

Backstop in Folded Position

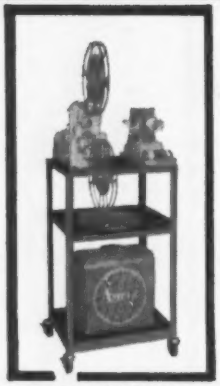
Kansas School SAVES MONEY
...by Installing DUAL BACKSTOP

The above picture shows the Rolla, Kansas school gym with a TBS side folding backstop located in the center of gym. Because of E-Z Fold's single stem "T" design, two banks can be mounted and the complete unit folded to the side, permitting play on the contest court. . . . For practice the unit is let down into the center of the gym making two short courts with four banks. This unit, as are all E-Z Fold backstops, is folded by the pressing of a switch.

E-Z FOLD INC. *Further Information May Be Obtained by Writing to* BOX 188-A SPEARVILLE, KANSAS

Circle **OV-287** on reply card, last page

THE PIXMOBILE PROJECTION TABLE



KEEPS YOUR EQUIPMENT READY FOR USE

Save time...save storage space. Prepare your visual presentation in advance on the portable **Pixmobile**, roll it in, show it, store your equipment on it. Sponge rubber top, large enough for both movie and slide projector. Has 4" wheels, equipped with brakes that hold on incline. Vibrationless. Several models and heights. ***42" table only $32.95.***

OPTIVOX PORTABLE EASEL

FOR BETTER CHART TALKS

Make a better showing with the versatile **OPTIVOX**, suitable for either floor or table. Steel working board, finished in "rite-on" green, is adaptable for chalk, charts, or magnets. Aluminum legs fold into compact unit. ***Only $44.95*** Carrying case, lamps optional.

Write for Literature and Name of Dealer.
Some Dealer Territories Open. Write...

THE ADVANCE FURNACE CO.
2310 EAST DOUGLAS WICHITA, KANSAS

Circle **OV-288** on reply card, last page

GOLD MEDAL PRODUCTS CO.
319 EAST THIRD STREET
CINCINNATI 2, OHIO
PHONE: DUNBAR 1-1333-4

HERE'S WHY... POPCORN BELONGS IN EVERY SCHOOL

Thousands of schools at every level now own popcorn poppers. You should see to it that your schools have Popcorn, too. Here are just a few of the many benefits that popcorn brings your students and the school community.

- *Better Teeth*
- *Healthier Gums*
- *Provides Vitamins and Minerals*
- *High Food Energy*
- *Provides Ample Roughage*
- *High Protein Content*
- *Better Student Spirit*
- *Good Group Project*
- *Profit for Needed Equipment*

POP-A-LOT

Capacity per hr.: 100 dime sales 8.00 profit. Price $199.00 Other models up to 300 sales per hour.

See to it that your students get all these benefits. School systems can buy on no money down; pay out of profits as they are earned. Student groups run the operation. Sales opportunities are plentiful. Start the ball rolling now.

School Popcorn Division
GOLD MEDAL PRODUCTS COMPANY
303 East Third Street Cincinnati 2, Ohio
World's largest manufacturer of counter model poppers.

Write now for details on poppers, brochure on school popcorn sales, and free wholesale catalog. . .

Circle **OV-289** on reply card, last page

RC M

FOR BETTER SCHOOLS

MUSSON

SAFETY DESIGNED

RUBBER

PERFORATED MATS

Specify safety and quality for your school entrances and lobbies. MUSSON mats are made in all sizes and shapes, for all areas. Easy to clean and handle.

PEBBLE BASE allows air circulation and drainage under the mats.

HEAVY DUTY LIVE RUBBER

PYRAMID SURFACE DESIGN gives safer foot traction and ease of cleaning.

BLACK BROWN RED GREEN GRAY

Perforations, cloverleaf, hexagon, round, or rectangular, are made so the newest spike heels will not catch. Suitable for recess or surface installation. Made 3/8" or 1/2" thick. Sizes up to 72" x 16'6" in one section.

MUSSON MOLDED RUBBER STAIR TREADS

Musson makes treads of the toughest, heaviest gauge and weight, molded rubber. They are designed for school safety, beauty and durability. Try them.

Write for catalog samples and factory prices

THE R. C. MUSSON RUBBER CO.
1314 E. ARCHWOOD AKRON 6, OHIO

Circle **OV-290** on reply card, last page

Scoremaster

THE NAME THAT ASSURES YOU OF THE FINEST IN SCOREBOARDS

Illustrated is Model 1250-2 today's most popular and widely used Football Scoreboard and Timer.

Scoremaster Boards for Football, Basketball, Baseball, Swimming or Hockey deliver the utmost in accuracy, readability, ease of installation and low maintenance.

Plan now for Spectator Satisfaction for next season and many seasons to come by writing today for complete information and prices.

THE M. D. BROWN COMPANY
2207 Lake St. MUtual 3-3100 Niles, Mich.

"When Split-Seconds Count, Count On Scoremaster"

Audio-Visual Aids

Leadership Training—"Twelve O'Clock High" starring Gregory Peck. A bonanza of leadership principles and techniques in this "entertainment" film. Lease or rental. Films, Inc., 1150 Wilmette Ave., Wilmette, Ill.

Circle **OV-401** on reply card, last page

The Nature of Language—Series of 13 30-minute black-and-white films for college and special adult usage. Provides general approach to beginning linguistics and covers nature, structure, development of language. NET Film Service, Audio-Visual Center, Indiana University, Bloomington, Ill.

Circle **OV-402** on reply card, last page

The Sea—"Survival in the Sea." Four 30-minute films for high school, college biology classes and general adult groups. Theme: marine science, understanding how various forms of life adapt themselves to an underwater environment to survive. NET Film Service, Audio-Visual Center, Indiana University, Bloomington, Illinois.

Circle **OV-403** on reply card, last page

U.S. Government Film Catalog—"Films for Schools and Colleges, 1960–61." Annotated list of 16mm films and 35mm filmstrips available for sale in the following curriculum areas: Science, Social Studies, Education, and Vocational Education. United World Films, Inc., 1445 Park Ave., New York, N.Y.

Circle **OV-404** on reply card, last page

How to Watch Teaching Films—"Look, Listen, and Learn." 24-page booklet. $2.00 per hundred. Helpful advice for the student to enable him to get the most out of the educational films he views. Coronet Films, 65 E. South Water St., Chicago 1, Ill.

Circle **OV-405** on reply card, last page

Educational Filmstrip, Slide Catalog. The new 1961 catalog by SVE lists 139 new filmstrips and over 600 color slides. Grade levels K through 12. Society for Visual Education, Inc., 1345 W. Diversey Parkway, Chicago 14, Ill.

Circle **OV-406** on reply card, last page

Circle **OV-291** on reply card, last page

now Pella® WOOD FOLDING PARTITIONS are extra durable for schools

All-wood panels with NEW dimensions of 10⅜" x 1-1/16". For openings of any width and heights up to 20' 1". Patented steel spring hinging system for dependable, easy operation *even with constant rugged use.* No floor guide required. Fast installation. Easy to clean. Available in 6 genuine wood veneers: **WHITE ASH • BIRCH • OAK AMERICAN WALNUT • PINE • PHILIPPINE MAHOGANY**

Pella®

WOOD FOLDING PARTITIONS

THIS COUPON ANSWERED WITHIN 24 HOURS

ROLSCREEN COMPANY, Dept. LI-21, Pella, Iowa

Please send me complete details on PELLA WOOD FOLDING PARTITIONS and name of nearest PELLA distributor.

NAME

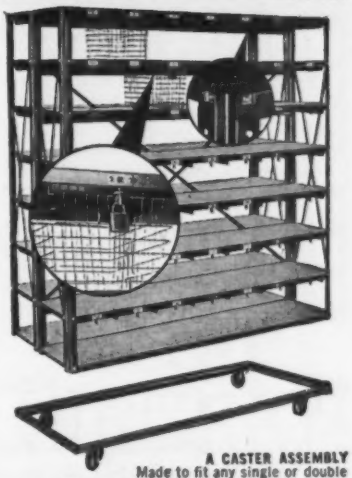
ADDRESS

CITY & ZONE STATE

MAKERS OF FAMOUS PELLA WOOD WINDOWS, ROLSCREENS, WOOD FOLDING DOORS AND WOOD SLIDING GLASS DOORS

Circle **OV-292** on reply card, last page

Any Size GYMNASIUM **BASKET RACKS** WITH RECESSED HASPS



A CASTER ASSEMBLY Made to fit any single or double rack, may be added or removed at any time.

Insist on Neubauer Basket Racks for these *exclusive* features:

1. Rigid *twin-post* corners make the whole rack stronger,
2. Your choice of *any size* to fit odd baskets or limited space*,
3. *Easier assembly,* hasps and dividers installed at the factory,
4. *Recessed hasps* can't snag clothing or cause injury, (Hasps omitted if desired)

plus a choice of four popular baked enamel finishes, plated hardware, sturdy bracing, and other details of quality.

STORAGE SHELVING with patented twin-post corners

AND

LIBRARY SHELVING

with beautifully finished end panels, can be furnished in any size to fit your room dimensions. Baked enamel colors are green, gray, tan and beige.

***No extra charge**

You don't pay a premium for odd sizes when you buy Neubauer racks and shelving.

TWIN POST Neubauer MANUFACTURING CO. 517 LOWRY AVENUE N.E MINNEAPOLIS 18, MINN.

MANUFACTURERS' CATALOGS

Rubber Cushioning Mats

Mitchell's Safety Surf, matting of interlocking rubber blocks, is designed to be used under playground equipment to protect children from falls. Extra-thick, non-slip, maintenance free surface. Mitchell Rubber Products, Inc., 2120 San Fernando Rd., Los Angeles 65, Calif.

Circle **OV-501** on reply card, last page

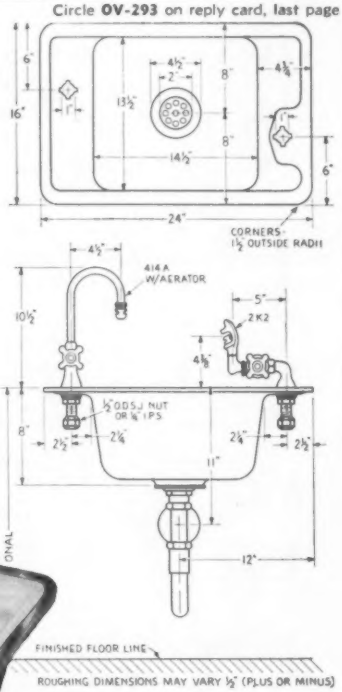
Floodlighting

The Wide-Lite Lumitor uses quartz-iodine lamps with rated life of 2,000 hours. Floodlight has vertical beam spread of 9°; horizontal beam spread of 100°. Manufacturing process insures that lamps will not grow dim during use. More information from Wide-Lite Corp., Box 191, Houston, Tex.

Circle **OV-502** on reply card, last page

Circle **OV-293** on reply card, last page

DECK TYPE FOUNTAIN "SPECS"?



Pat. No. 2,841,799

Whatever your specifications **HAWS** has the model you need!

Yes, HAWS provides Deck-Type Fountains for **every** classroom requirement. From small receptors to complete integral deck top units, HAWS meets your specs in three versatile materials: rugged enameled iron, 17 gauge stainless steel, and molded fiberglass in color! Equip them with virtually **any** combination of HAWS faucet and fountain fixtures for classroom service. See the full line in SWEET'S, or send for your free catalog. **Illustrated is Model 2450** in enameled iron.

HAWS DECK TYPE FOUNTAINS

A product of **HAWS DRINKING FAUCET COMPANY**

Fourth and Page Streets Berkeley 10, California

Since 1909 — Over 50 Years of Progress

Chalkboard and Its Uses

"New Directions in Chalkboard" is the name of a brochure describing many new classroom chalkboard applications such as: free-standing partitions, easel-reversible units, movable panels, and convertible units that combine table surface, tackboards, and chalkboards in one assembly. Johns-Manville, 22 E. 40 St., New York 16, N.Y.

Circle **OV-503** on reply card, last page

Heating, Air Conditioning

Diagrams of typical heating installations as well as graphic treatment of duct and register locations, including color coded air circulation patterns. The Payne Co., 855 Anaheim-Puente Rd., La Puente, Calif.

Circle **OV-504** on reply card, last page

Office Desks, Chairs

New 6-page folder pictures and describes the Columbia Meridian collection of executive desks and matching credenzas, and Nine-to-Five group of modular unit work centers. Columbia-Hallowell Div., Standard Pressed Steel Co., Box 1246, Jenkintown, Pa.

Circle **OV-505** on reply card, last page

Elementary Science, Math Bibliography

A comprehensive bibliography lists over 3,000 elementary science and math titles considered eligible for purchase under NDEA. Available from Carl J. Leibel, Inc., 1236 S. Hatcher Ave., La Puente, Calif.

Circle **OV-506** on reply card, last page

Building Exits Code

New provisions dealing with life safety in schools are among the significant changes in the 1960 edition of the Building Exits Code just released by the National Fire Protection Association, 60 Batterymarch St., Boston 10, Mass.

Circle **OV-507** on reply card, last page

Floor Maintenance Program

Helpful leaflet shows how schools can keep their floors shining bright yet cut costs up to 35%. Minnesota Mining and Mfg. Co., 900 Bush Ave., St. Paul 6, Minn.

Circle **OV-508** on reply card, last page

Mobile Storage System

Colorful idea catalog showing how offices can literally "stretch walls" and expand space through Dolin Mobile Storage System. Dolin Metal Products, Inc., 315 Lexington Ave., Brooklyn 16, N.Y.

Circle **OV-509** on reply card, last page

Weatherstripping

What you should know about interior and exterior weatherstripping against dust, noise, drafts, leaks, and light. Pemko Mfg. Co., 5755 Landregan St., Emeryville, Calif.

Circle **OV-510** on reply card, last page

Shower Safety

School showers can suddenly become scalding hot unless there is a thermostatic control valve to safeguard. "Why Be Half-Safe?" tells pertinent facts. Lawler Automatic Controls, Inc., Mt. Vernon, N.Y.

Circle **OV-511** on reply card, last page

Slide Rule Instruction

"A Teaching Guide for Slide Rule Instruction" is free to secondary and college level educators. Effective ways of introducing the slide rule. Pickett & Eckel, Inc., 542 S. Dearborn St., Chicago 5, Ill.

Circle **OV-512** on reply card, last page

Language Lab Programming Guide

"Programming Guide for the Electronic Classroom." Solutions to the important problem of how to find time to effectively supervise a language lab, while retaining the "freedom to teach," are suggested in this booklet. Magnetic Recording Industries, 125 Fifth Ave., New York 11, N.Y.

Circle **OV-513** on reply card, last page

Instructional Materials Catalog

Complete new catalog of learn-by-doing educational kits in science and mathematics. Models of Industry, Inc., 2100 Fifth St., Berkeley 10, Calif.

Circle **OV-514** on reply card, last page

Aluminum Window Specifications

1960 Edition of "Aluminum Window Specifications," divided into three sections: general requirements, specific requirements, and hurricane specifications. Aluminum Window Manufacturers Association, 630 Third Ave., New York 17, N.Y.

Circle **OV-515** on reply card, last page

Cellular Floor, Roof Decks

New 6-pg. folder describes how precast concrete cellular floor and roof decks provide a network of raceways for electrical, television, and telephone wiring in the University of Houston's Fred J. Heyne Building. The Flexicore Co., Inc., 1932 E. Monument Ave., Dayton 1, Ohio.

Circle **OV-516** on reply card, last page

Maintenance Manual

Detailed information on modern building maintenance methods and materials helpful to all school personnel concerned. Johnson's Wax, Service Products Div., Racine, Wis.

Circle **OV-517** on reply card, last page

TV Systems

Anyone can design and install master TV systems with the new Blonder-Tongue Manual. Blonder-Tongue Laboratories, Inc., 9 Alling St., Newark 2, N.J.

Circle **OV-518** on reply card, last page

Building Codes Supplement

This 1960 Supplement to the ASTM Standards in Building Codes calls attention to the revised standards and the new and revised tentatives in the construction field. 270 pages. $3.25. American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa.

Circle **OV-519** on reply card, last page

Grandstand, Bleacher Chart

If you are planning the installation of a grandstand or bleacher, this seating chart reference should be of considerable help. It shows seating capacity of grandstands up to 20 rows high and 222 feet in length. Available from Standard Steel Bleacher Div., Three Rivers, Mich.

Circle **OV-520** on reply card, last page

IBM Attendance Cards

Systems Folder, Form K20-1261, describes the use of IBM prepunched and end-printed attendance cards which save time, improve accuracy and provide better control. International Business Machines Corp., Data Processing Div., 112 E. Post Rd., White Plains, N.Y.

Circle **OV-521** on reply card, last page

Shelving Catalog

Catalog 2400 contains full information on the Penco line of boltless T-line shelving, angle shelving, tool storage inserts, drawer case units, steel lockers, bookcase

Circle **OV-294** on reply card, last page

MODERN SCHOOLS CHOOSE

Mitchell

FOLD-O-LEG

PorTables

Doublers UniTables

For Versatility Durability Economy

Students-Teachers and Supervisors, Administrators and School Boards, all prefer Mitchell multi-purpose equipment . . . each in their own way. Students like the accessibility, beauty, and comfort of the PorTables, Doublers, and UniTables. Teachers and Supervisors want the safety, speed and easy operation, practicality and mobility found in these units. Administrators and School Boards rightfully regard long-range utility, reduction of replacement costs, and the *standardization* offered in this complete line, as primary considerations. All of these advantages, and more, have long been accepted from coast to coast, as Mitchell standards of guaranteed quality. You'll find that Mitchell will meet your needs the best.

MITCHELL MANUFACTURING CO.

2726 South 34th Street

Milwaukee 46, Wis.

Please send me literature on ☐ PorTables ☐ Doublers ☐ UniTables

☐ Please send me the name of nearest representative.

Name..... Title.....

Address.....

City..... Zone..... State.....

Catalogs (continued)

shelving, etc. Penco Div., Alan Wood Steel Co., 200 Brower Ave., Oaks, Pa.

Circle **OV-522** on reply card, last page

Pencil Sharpeners

C. Howard Hunt Pen Co. announce the availability of their new catalog listing all their Boston pencil sharpeners and Speedball products. C. Howard Hunt Pen Co., 7th and State Sts., Camden, N.J.

Circle **OV-523** on reply card, last page

Architectural Anodic Finishes

Design considerations, a complete description of the anodizing system, specifications and architectural aluminum alloy properties are included in the new booklet on Kalcolor. The 13 available colors are reproduced. Kaiser Aluminum & Chemical Sales, Inc., Dept. NR-42, 300 Lakeside Dr., Oakland 12, Calif.

Circle **OV-524** on reply card, last page

Portable Wood Bleachers

Information on how a modest initial group of bleachers can be used for multiple purposes and easily expanded by adding sections later. Line described is Portable Wood Bleachers by Universal Bleacher Co., Champaign, Ill.

Circle **OV-525** on reply card, last page

Metal Office Furniture

New catalog shows the unusually attractive 4000 line consisting of 75 basic units and thousands of possible variations of executive, secretarial and clerical desks and related units. All-Steel Equipment Inc., Aurora, Ill.

Circle **OV-526** on reply card, last page

Tile, Brick

Glazed and unglazed tile and brick for both interior and exterior applications described in catalog S-60. Many colored and textured facing bricks and ceramic glazed tiles highlighted for architects. Natco Corp., 327 Fifth Ave., Pittsburgh 22, Pa.

Circle **OV-527** on reply card, last page

Floodlighting

Catalog MV660 illustrates the new higher-output mercury vapor weatherproof floodlights for low-cost, wide area lighting. Units described are singles and clusters for pole-top, mid-pole, wall or surface mounting, with or without integrally mounted transformers. Stonco Electric Products Co., Kenilworth, N.J.

Circle **OV-528** on reply card, last page

Plumbing Fixtures

The Super Secur Ware catalog contains complete information on the latest unbreakable urinals, showers. Interesting feature is a story on what goes into the manufacture of unbreakable cast aluminum plumbing fixtures. Aluminum Plumbing Fixture Corp., 778 Burlway Rd., Burlingame, Calif.

Circle **OV-529** on reply card, last page

Structural Ceramic Tile

Sculptured structural tile permits the school architect to create walls with depth and dimension: wall plus finish plus pattern are combined in one structural unit. Catalog available from Stark Ceramics, Inc., Canton 1, Ohio.

Circle **OV-530** on reply card, last page

Standard Typewriter

Fold-A-Matic construction, a new idea in typewriter design that enables the machine to be opened like a book for inspection right at the point of use, is the subject of a colorful new folder just published by Remington Rand Div., Sperry Rand Corp., 315 Park Ave. S., New York 10, N.Y.

Circle **OV-531** on reply card, last page

Sports Field Layouts

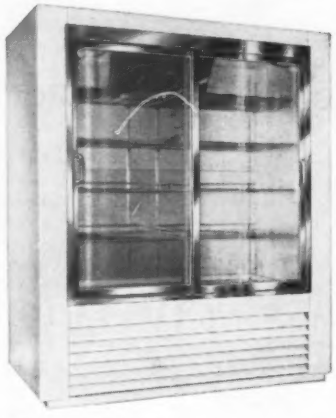
Handy, quick reference guide booklet has complete field and court dimensions and illustrated diagrams for baseball, softball, basketball, tennis and volleyball. Robertson Steel & Iron Co., Cincinnati 2, Ohio.

Circle **OV-532** on reply card, last page

Circle **OV-295** on reply card, last page

NOR-LAKE...
"FINE-LINE" in every way!

R-15 REFRIGERATOR — Eight adjustable plated wire shelves, ten big storage areas in 15 cu. ft. Aluminum interior, heavy cold rolled steel with baked enamel exterior. Double two-keyed locking doors. Door heater strips seal for total cold. Fully automatic condensate removal. Fine-Line styled, also available with drawers and Blood Bank Alarm system for biological uses.



R-45G REFRIGERATOR—Big 45 cu. ft. capacity in Fine-Line heavy steel cabinet. Sliding doors are three ply glass. Fiberglas insulation, multiple frame and double door heater strips seal in cold. Polished aluminum frame, baked enamel exterior. Companion 45 XHG Freezer with R45G features available. Also solid-door Refrigerator, Freezer and Refrigerator-Freezer combination with same capacities are available.

NOR-LAKE'S FINE-LINE IS A FULL LINE!

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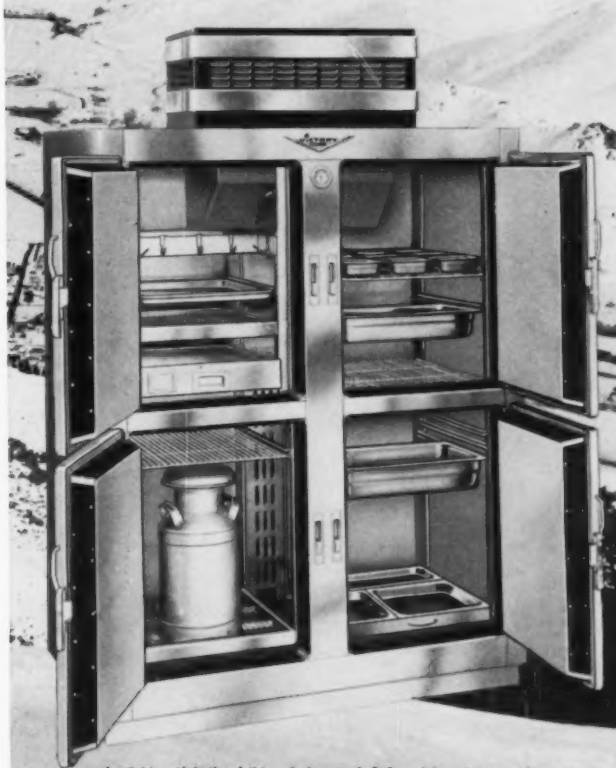

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